assets to add to form its next broader monetary measure. Just as there was no question that currency belonged in the narrow definition of money, so it was clear that commercial bank savings accounts should be in the next category of assets after the means-of-payment grouping, the new M_2. To these bank savings accounts were added savings accounts at thrift institutions, in accordance with the principle that deposits which serve similar functions are close substitutes for one another and therefore should be grouped together in one aggregate even if they are held at different types of institutions.

However, the Fed's decision to include in the new M_2 all "small" (i.e., under $100,000) time deposits at all institutions seems to violate the principle that each successively broader aggregate should incorporate assets sharing roughly the same degree of liquidity. While about 40% of small time deposits are in the form of so-called money-market certificates that mature in at most six months, the remainder include deposits with maturities of up to several years.

The decision to include such relatively illiquid assets with passbook savings apparently represents a concession to those monetary analysts who believe that the quest should be for an aggregate with features of stability and predictability, especially in relation to GNP, rather than for conceptual purity. Greater stability is achieved by inclusion of all small time deposits because in circumstances in which interest rates are rising and funds are being withdrawn from savings accounts, many of these funds wind up in small time deposits, thus changing the composition but not the total of M_2. Even so, the fact that the new M_2 does not consist solely of like ingredients (in terms of maturity features)—and thus represents a departure from the basic organizing principles set forth by the Fed for its new definitions—may generate some skepticism among policymakers about its value, at least until its worth has been shown.

Novel ingredients

Moreover, policymakers are unlikely to feel comfortable relying on the new M_2 for a while, since it differs fundamentally in composition from any previous measures of money. These had always been limited to currency plus the deposit liabilities of domestic banks and thrift institutions. But the new M_2, in addition to the items already enumerated, includes overnight repurchase agreements issued by commercial banks, money market mutual fund shares, and overnight Eurodollar deposits at the Caribbean branches of U.S. banks. These are novel inclusions in the monetary aggregates. However, many of the discussions leading up to the new definitions centered not on whether they were sufficiently near-money to belong in M_2, but whether they might even have been included in M_{1b}.

Those who took the latter view in the case of overnight repurchase agreements (RPs) were arguing, at least implicitly, that RPs—in which a bank sells government securities to an investor and agrees to buy them back the next day at a higher price—have the effect of reducing the reported total of demand deposits without reducing the amount of demand balances available to depositors during most of the business day. That interpretation, perhaps influenced by the customary use of the term "overnight" in connection with RPs, would appear to assume that the investor makes the decision to "do" the RP at the end of the day. If such were the case, the RP might be considered in a sense the after-hours *alter ego* of a daytime demand deposit, and therefore its equivalent for purposes

of money supply tabulation. In practice, however, as the Fed discovered in a staff study, RPs typically are arranged during the morning—mainly because that is when banks are lining up their daily money position. The invested funds thus are committed through the greater part of the day and effectively removed from availability to the investor.

Money market mutual funds also provoked discussion as to appropriate classification. These funds, which allow savers to earn market interest rates by pooling their funds for investment in a variety of short-term instruments, have grown to over $50 billion from about $4 billion as recently as the start of 1978. Their appearance as part of the aggregates is noteworthy since they are not the liabilities of any depositary institution, in contrast to all of the other components of the M's except currency. Although most of these funds permit checks to be written on them in amounts above some minimum (typically $500), a recent study by the Federal Reserve Bank of Richmond indicates that individuals view them primarily as an alternative to savings accounts at banks and thrift institutions, rather than as interest-bearing checking accounts. Relatively little check writing against them actually occurs. Hence, the Fed appears to have chosen properly in including them in M_2 but not in M_{1b}, although it should monitor closely the check-writing activity associated with them and be prepared to revise its decision if they evolve into essentially interest-earning demand balances.

The placement of the remaining item in M_2—so-called overnight Eurodollar (i.e., dollar-denominated) deposits held by U.S. nonbank residents at Caribbean branches of U.S. banks—was apparently decided without great difficulty. In quantitative terms, overnight Euros are much less important than either RPs or money market mutual funds, since they amount to only a few billion dollars.

If the exact placement of the dividing line between M_{1b} and M_2 was somewhat arbitrary, the judgment on where to draw the line between M_2 and still broader measures was all the more so. For example, the Fed could have included large ($100,000 and over) time deposits in M_2, or at least some portion of them, according to such criteria as whether they are negotiable in the secondary market or whether they mature within some given period. Presumably, the decision to exclude the negotiable portion from the new M_2 reflects the same kind of reasoning which led to their exclusion from the old M_2—that they more closely resemble money market instruments than they do deposits, and that they would detract from the stability of the M_2-GNP relation. The nonnegotiable portion is presumably less liquid than the rest of the components in M_2 (except, of course, for the small time deposits whose inclusion was questioned above).

Still broader measures

Having decided to draw the line for M_2 at large time deposits, the Fed could have concluded that no useful purpose would be served by defining further groupings of assets apart from one large measure of money and all near-monies. Instead, it first established a new M_3, consisting of M_2, large time deposits, and term (i.e., longer than overnight) RPs. What role, if any, this somewhat strange amalgam will play in policy deliberations is far from clear. Having created M_3, however, the Fed did then proceed to a "catch-all" which it designated "L," for liquidity. Basically, L is meant to encompass everything that is either money or very readily convertible to money.

Despite the Fed's efforts to identify and in-

clude in its new M's and in L all assets possessing qualities of moneyness, it is a certainty that, under conditions of rapid financial innovation, new assets will evolve that will in time have to be fitted into its mosaic. The new M's and L are thus not frozen as to content. Indeed, the Fed already has plans to add nonbank travelers checks—a not insignificant kind of transactions money—at the M_1 level as soon as data availability permits. (Travelers checks which are the liabilities of banks were part of the old M_1 and are included in M_{1a}.) One possibility for future inclusion in either the new M_{1b} or in the new M_2 is an innovative type of brokerage account which earns interest and on which checks of any dollar amount may be written. This kind of account (similar to money market mutual funds) is not yet quantitatively important, since substantial balance or collateral requirements are typical. But the Fed clearly will need to monitor the growth of such accounts to see how they develop and whether in fact the check-writing privilege is actively used.

It is a certainty, moreover, that discussion will continue both within the Federal Reserve System and among others with respect to the conceptual issue of what the content of the M's and L should be. The Fed, for instance, decided against inclusion, in any of its groupings, of established credit facilities available for use by either individuals or businesses—such things as credit-card lines, overdraft lines, and confirmed commitments by banks to lend. On balance, that exclusion makes sense because, while such facilities can be used to purchase goods and services, e.g., a restaurant meal, they are not a final means of payment, but rather create liabilities which in turn must ultimately be discharged with payment in money. Yet, there is good reason to think that the possession of established credit facilities may condition both individuals and businesses to spend in a way not dissimilar to the conditioning that comes from having money balances. Thus, whether or not the Fed ever lodges credit-facility numbers in its formal classification, a strong case does exist for development and refinement of credit-facility data.

When the dust settles

Given the tremendous effort which went into this redefinition of the aggregates, what can be said in general about the gains which have been achieved? The basic conclusion is that the effort has been worthwhile, since it has served to focus attention on the importance of money for economic policy as well as on the danger of mechanical reliance on any one definition of money in an era of rapid financial change. While it is possible to question some of the specific judgments which were made, particularly the inclusion of all small time deposits in M_2, the new framework has sound conceptual underpinnings. Moreover, the functional approach of the new definitions should make it easier to incorporate within this framework future financial innovations as they occur. And since the Fed has decided to publish on a regular basis data on the components of the aggregates, it will be possible for individuals to "roll their own" measures of money if they find alternative groupings more useful for their own purposes.

Inevitably, the new measures will suffer many of the same shortcomings as guides to policy as did the old ones, because it appears that new elements of instability have evidently developed in the relationship between money and economic activity. In particular, the velocity of

M_{1b} spurted sharply during the early part of the recovery from the last recession, just as did the velocity of the old M_1. Therefore, M_{1b} would also have led policymakers to underestimate how stimulative monetary policy was in 1975 and 1976.

Direct comparisons between the old and new M_2 are somewhat more questionable, since, as was noted, they are fundamentally very different constructs, despite their shared symbol. Still, it is a fact that the new M_2, after growing at an average rate of 12.5% from 1975 through 1977, decelerated sharply to an average rate of 8.6% in 1978 and 1979, slowing even more sharply since late 1977 than did the old M_2. That such a rapid drop in the growth rate of a broad measure of money and near-money has not yet been reflected in a more pronounced weakness in economic activity obviously raises questions as to how useful the new M_2 will be in helping forecasters to anticipate cyclical turning points.

The chances are, however, that policymakers themselves will be mindful that the new definitions do not provide any easy answers to the problems faced by the nation's economy. Clearly, the main responsibility for monetary policy today is to play a useful role in helping to bring inflation under control. For that purpose, the essential objective for the Fed is to effect a permanent lowering of the growth rates of money, however defined, since all of the aggregates, old and new, have been expanding more rapidly in the 1970s than is consistent with a relatively stable level of over-all prices. In light of the changing relationship between various measures of money and economic activity, the Fed cannot be sure that achievement of any given target for money growth will be accompanied by the kind of economic performance which it seeks. The real challenge confronting the Fed will be to evaluate continually the appropriateness of the growth targets it establishes for the new measures of money, and, indeed, the appropriateness of those measures themselves.

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The Reshaping of Policy

IN the days immediately preceding the President's March 14 anti-inflation package, intense interest prevailed in financial circles and elsewhere as to whether the Administration would begin to cope with the explosive rise of federal transfer payments to individuals. That was so simply because such payments long have been recognized to hold the key to over-all expenditure retrenchment.

Indeed, except for relatively brief spans, increases in direct payments under open-ended "entitlement" programs (e.g., Social Security, veterans' pensions, government employee retirement) have dominated the climb in the federal budget for a decade and a half. Whereas payments to individuals, including military retirees, amounted to only 28% of the total federal budget in the mid 1960s, they currently account for 50% of the total. Strikingly, on a constant-dollar basis, the rise in payments to individuals since the mid 1960s accounts for 93% of the total rise in federal spending that has occurred.

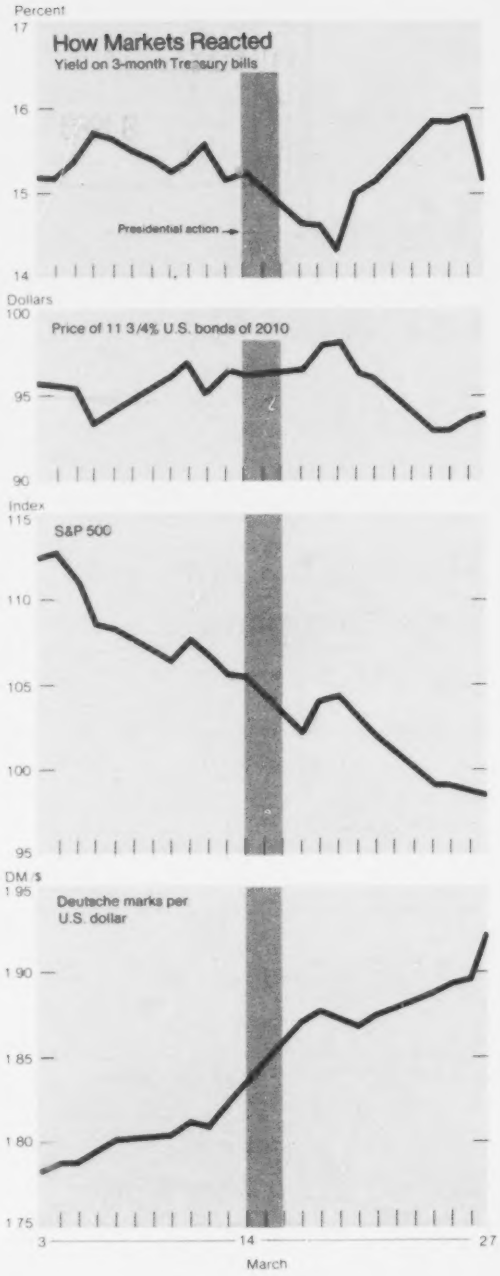
This explosive trend of direct federal benefit payments to individuals has reflected most importantly growth in the number of persons covered by transfer programs and also the extension of inflation-escalator clauses to more and more of them—with some 87% of individual benefit payments (and some 43% of total federal outlays) now subject to escalation. And, of course, the influence of escalation has become especially crucial recently, as inflation has accelerated and as the consumer price index, on which the escalation of federal benefit payments is based, has tended to exaggerate the price deterioration occurring in the economy.

The March 14 package did not in fact include any material reshaping of the direct-bene-

fits portion of the budget either by escalation modification or otherwise.* And because it did not, no sizable slowing in the growth of total government expenditures was possible. In actuality, the Administration's *ad hoc* quest for cuts among other expenditure categories barely yielded enough potential savings to compensate for the fact that, as of mid March, expenditures for both fiscal 1980 and fiscal 1981 had to be projected higher than they were in January largely because of increased inflation and higher interest payments. Indeed, the upward revisions in spending fully offset proposed cuts—and thus the combined expenditure total for fiscal 1980 and fiscal 1981 was projected at precisely the same level on March 14 ($1,180 billion) as at the time of the President's January budget message.

The worsened inflation outlook, to be sure, also justified an upward revision of revenues for both fiscal 1980 and 1981. But even though sizable upward revenue revisions were made, the Administration's objective of presenting a balanced budget in fiscal 1981 (with a moderate-sized contingency cushion) would still have been unattainable without tapping new revenue sources. That, indeed, seems to have been the dominant reason for both the decision to institute the crude-oil import fee and the proposal to apply withholding to interest and dividend payments.

The ultimate consequence, thus, of the failure to slow the rise in government transfer payments is that the already heavy tax burden on the



*In the case of government-paid retirement benefits (for Social Security and government workers), the most actively discussed possible remedies for overescalation include: limiting escalation to some fraction—say 75%—of any given period's increase in the CPI, as is typically the case in the private sector; replacing the CPI with a more accurate measure of inflationary pressures such as the personal consumption deflator; taxing Social Security and like benefits except at lower-income levels; and constructing a new CPI market basket for the escalation of retirees' benefits specifically related to their buying patterns.

American economy is being raised still further. Indeed, a rising tax burden (worrisome for the performance of the economy both in the near term and longer future) is at the heart of the Administration's budget-balancing effort. On the basis of the President's March 14 package, total federal tax collections are projected to rise by 15% in the current fiscal year and by a further 17% in fiscal 1981. That two-year increase in taxes of approximately one third amounts to almost $160 billion.

Draining the private sector

The chart on page 4 indicates the effect that the massive drainage of funds from the private sector is having on the average tax rates of individuals and companies. As can be seen, the average rate of personal income taxation rose to 14% last year, the highest level of the past two decades—with the exception of 1969 when the Vietnam War surcharge was in effect. What has happened over the years is that the reductions that have been enacted from time to time in statutory tax rates have been more than negated by the interaction of inflation and progressivity. The average rate of personal income taxation will, of course, be still higher this year and next year than in 1979, provided the present policy of not seeking a tax cut is maintained.

The climbing Social Security tax burden is even more striking. It reflects three things: (1) a significant rise in recent years in the wage base subject to Social Security taxation ($25,900 this year and scheduled to jump to $29,700 next year, up from $16,500 as recently as 1977); (2) a rising Social Security tax rate, which for individuals and employers in combination is now 12.26% of wage-base wages and will rise to 13.3% next January 1; and (3) the ballooning of nominal incomes because of inflation. In 1981, a middle-income American with wages equal to the specified ceiling wage base will pay almost $2,000 into the Social Security trust fund and his or her employer will duplicate that payment. With the age-distribution of the population changing in a way that will increase the ratio of nonworkers to workers in the future, a progressively mounting burden of Social Security taxation is likely. This is particularly worrisome from the standpoint of an economy critically in need of enlarged personal saving.

As for trends in corporate taxation, perhaps the most significant thing is that the national intent to stimulate corporate saving and investment (reflected over the years in reductions of statutory corporate tax rates and liberalizations of investment tax credits) has been frustrated by inflation's influence. Indeed, as the chart shows, there has been a tendency for the effective corporate tax rate, i.e., the rate on "economic profits," to rise in recent years. The corporate tax rate on economic profits is a more meaningful measure than the nominal tax rate (also depicted in the chart), since the latter is badly distorted in an environment of rapidly rising prices by taxation of illusory profits arising from inflated inventory values and underdepreciation. The rate on economic profits, it is true, is still below the extreme level of 1974 (when illusory—but taxable—inventory profits were extraordinarily large), but it is as high as at any other time in the past two decades, and even higher than when Vietnam War surcharges were in effect.

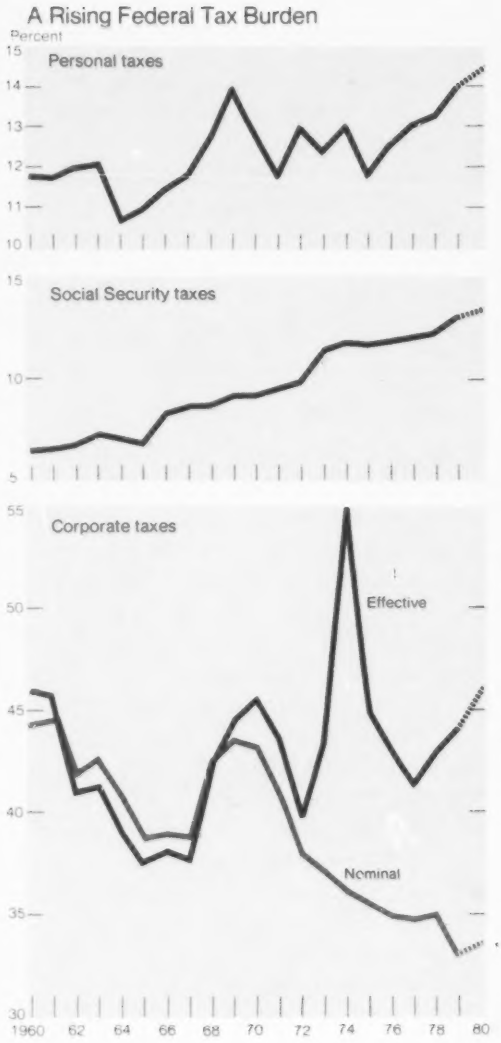
The fact that the March 14 budget-balancing initiative relies so heavily on enlarging the Treasury's tax bite is discouraging. The positive side of the initiative is that, even though the first step toward expenditure control has been gingerly, there is at least the fact of a beginning.

That is important. So, too, is the new mood around the country of impatience with ever-larger government and taxes. This suggests the real possibility of a more decisive follow-through on the expenditure side of the budget beginning, hopefully, next January when the political hurdles to retrenchment should be lower.

The heaviest load

Meanwhile, however, the economy has to live during the current budget year (fiscal 1980, ending September 30) with the huge and disruptive presence of the federal government and its agencies in credit markets, as well as with a rising burden of taxation. This set of circumstances clearly contributes to the possibility that a cyclical weakening of the economy will develop before too much longer. So, too, does the fact that the Federal Reserve continues to carry an inordinate and growing share of the policy-restraint load. Interest rates, already at extraordinary levels, not only got a further upward push as a consequence of the Fed's participation in the March 14 initiative; there also is a very real chance, ironically, that the move to selective credit controls will add to credit-market stress in the months ahead.

Faced with the reality of an untamed federal budget, and apparently dissatisfied with the pace at which traditional monetary restraint was working to curb credit usage in the economy, Fed officials elected to try to speed the process along by a combination of special penalties and admonition. The fact that their intent is serious indeed is evidenced by the application of a special reserve requirement even against increases in revolving consumer credit, something which accounts for only a negligible portion of the economy's total credit flows and whose growth already was slowing noticeably.



NOTE: The personal tax burden represents taxes as a share of income subject to tax, defined as personal income plus employee social insurance contributions minus transfer payments and "fringe benefits." The Social Security tax burden shows total social insurance contributions as a proportion of wages and salaries. Finally, the nominal corporate tax burden depicts profit-tax accruals as a share of reported earnings. The "effective" burden measures those accruals as a share of "economic profits"—i.e., abstracting from inventory profits and treating depreciation charges consistently over time on a replacement-cost basis.

How Recent Credit Growth Compares With Growth at Past Cyclical Peaks

	Net change in credit outstanding (Billions of dollars)			*Percent of total credit*		
	1979	*1973*	*1969*	*1979*	*1973*	*1969*
Federal government credit demand						
U.S. Treasury issues	38.8	7.9	−1.3	8.1	3.3	−1.1
Federal agency issues	51.1	20.4	7.4	10.7	8.5	6.4
Total federal credit	89.9	28.3	6.2	18.9	11.8	5.3
All other credit demand						
Mortgage credit	159.4	79.9	30.7	33.5	33.5	26.4
Consumer credit	42.3	26.0	10.8	8.9	10.9	9.3
Business credit	120.7	56.6	43.2	25.4	23.7	37.1
State and local government issues	21.3	14.7	9.9	4.5	6.2	8.5
Miscellaneous credit	42.2	33.3	15.6	8.9	13.9	13.4
Total nonfederal credit	385.9	210.5	110.3	81.1	88.2	94.7
Total credit growth	475.8	238.8	116.4	100.0	100.0	100.0

The aim of Fed officials to rein in tightly is clear, also, from their request that growth of banks' total domestic loans be held within a 6%-to-9% range during 1980. That represents a sizable drop from fairly brisk loan growth of late, amounting nationwide to some 13% in the twelve months ended in February. Successful adherence by banks to the guideline will almost certainly involve adjustment stress, since brisk loan demand—akin to the past year's 13%—is not unusual in the mature stages of business-cycle expansion, when companies' investment outlays tend to be large and businesses need appreciable amounts of financing.*

The substitution of quantitative restraint for the traditional approaches of monetary policy as a means of slowing loan growth clearly involves risk. Borrowers, notably farmers and proprietors of small businesses—who typically do not make provision in advance for obtaining credit—may find that banks' leeway within the restraint program is largely used up in honoring the claims of customers who already have established facilities.

Enlarged risks

Fed officials obviously are aware that their new initiative entails risks. That they have chosen to accept them is an indication of how seriously the intractability of the federal budget threatens the effort to curb inflation. As the table on this page shows, private credit demands in no sense look large for this stage of the cycle. What does look extraordinarily high for a mature stage of a business cycle is the volume of Treasury and federal agency borrowing. The

*In the prerecession year of 1959, for instance, bank loans expanded by 16%, even though inflation was minimal. In the next prerecession year, 1969, bank loan growth was held to 8%, largely because Regulation Q retarded the ability of banks to acquire loanable funds. And in the most recent prerecession year, 1973, bank loans expanded by 18%.

Federal government and federal agencies took 19% of all credit extended in U.S. financial markets last year. That was a sharply higher share than in the last two prerecession years (1969 and 1973) and more like government's typical share in the midst of a cyclical downturn in the economy.

Stated very simply, the perceived need for selective credit controls at this time traces unambiguously to the unprecedented appetite of Washington for credit during a period of prosperity. That appetite stems from its failure over many years to come to grips with the runaway rise of federal spending. Given the combination of rising taxes, high interest rates, and nonmarket allocation of credit, the risks of a more serious downturn than economists have been forecasting are clearly present.

Business Inventories: A Problem After All?

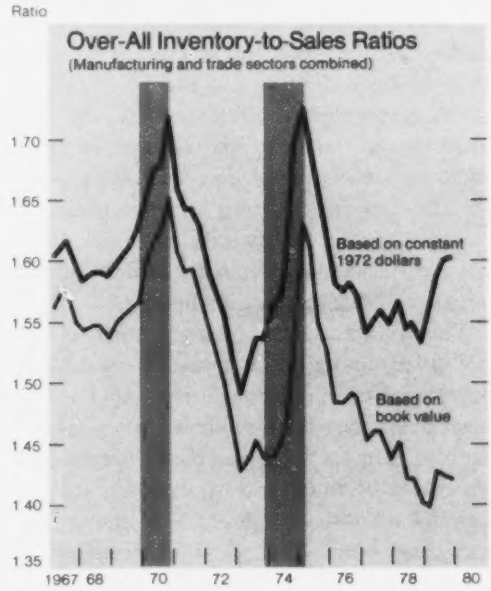
OF all the lessons painfully relearned during the Great Recession of 1974-75, the clearest certainly is that substantial peril attends aggressive inventory policies. Indeed, the severity of the last recession—steepest in 40 years—is explained in large part by the enormous inventory adjustment that occurred.

In the aftermath of that recession, and in fact over most of the past five years, businesses generally are perceived to have made determined efforts to keep the growth of inventories in relatively close alignment with the growth of sales —that is, in "balance." As a consequence, stocks in the aggregate now are widely regarded by economists and businessmen as being "lean." From that judgment flows the conviction that inventories largely have been neutralized as a source of economic instability and that a recurrence of the wrenching experience of 1974-75 appears unlikely. This, perhaps more than anything else, is the basis for the commonly held belief that the coming recession has a good chance of being short and mild.

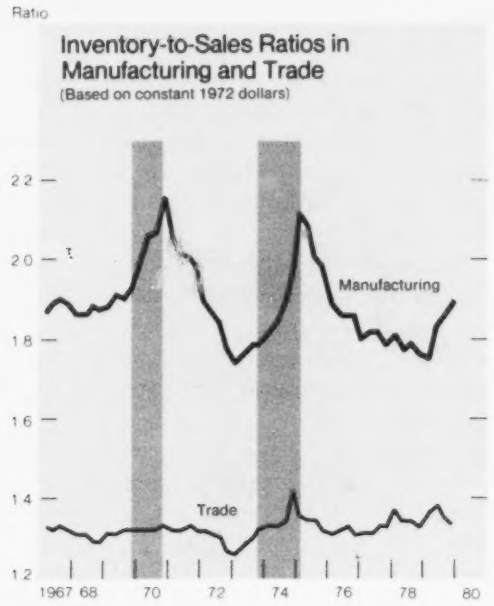
But have the "new" inventory policies really been tested? The answer is: not decisively. That is partly because the state of inventory balance is most difficult to determine at a time when final demand is growing. It is only when final demand is weakening, during cyclical contraction, that a real test occurs. But there is yet another reason for staying alert to possible inventory troubles. This is that, despite the appearance at present of reasonable balance between *aggregate* inventories and *aggregate* sales, the inventory-to-sales ratios of some *sectors* of the economy have begun to show deterioration.

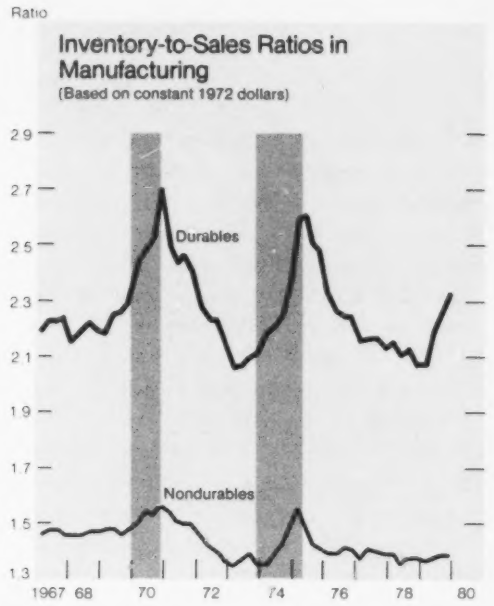
When examining inventory-to-sales ratios, either for the total economy or for particular sectors, it is essential in today's inflationary climate to look at "constant-dollar" ratios derived from deflated inventories and sales. That's necessary because inventory-to-sales ratios derived from book or current values tend to have a downward bias, since inflation swells the current value of sales more than it does the book value of stocks—some of which reflect historical pricing. The deflation exercise, to be sure, is likely to fall short of perfection—with the risk of incorrect adjustment obviously heightened when inflation rates are running high (box on page 10). Even so, deflating the inventory and sales numbers eliminates a large part of the distortion.

The chart on this page shows the dramatic difference in recent years in movements of book value and constant dollar inventory-to-sales ratios for the over-all economy (manufactur-



NOTE: Shaded areas in this and the following charts are periods of recession as designated by the National Bureau of Economic Research.





ing and trade sectors combined). The steady decline in the book value ratio from early 1975 to early 1979—with a pattern of relative stability since then—is a key reason for the judgment of many analysts that economy-wide inventories are not out of line. The constant-dollar ratio, however, is clearly less reassuring. Not only has it risen persistently since late 1978, but the steepness of the rise has been similar to that in earlier prerecession periods.

The less favorable inventory situation that has arisen during the past year is traceable to developments in manufacturing. As the left-hand chart above shows, the inventory-to-sales ratio in manufacturing has risen sharply since the end of 1978. In contrast, that for trade (retail and wholesale combined) has shown little net change, despite last year's significant backup of stocks at automotive dealers.

Within manufacturing, the rise that has occurred in the inventory-to-sales ratio during the past year is wholly the result of developments in the durable-goods area. The nondurable-goods ratio has been remarkably stable (right-hand chart above). In durable goods, the inventory-to-sales ratio moved up sharply over the course of 1979 and at yearend had risen to a level last seen in November 1974.*

Such an upswing warrants attention, particularly since it reflects underlying trends in sales and stocks that have some disquieting parallels with those of the 1974 period. Last year, as in 1974, the increase of the durable-goods inventory-to-sales ratio reflected the combination of rising real inventories and declining real sales. Deflated durable-goods stocks actually rose

*The increase in this ratio late last year undoubtedly was exaggerated to some extent by strike-related disruptions in the machinery and agricultural equipment areas. Indeed, following partial settlement of such strikes the inventory-to-sales ratio in durables manufacturing did fall back somewhat in January of this year but remained well above the third-quarter average. Thus, strike aberrations aside, evidence still points to a marked deterioration of inventory positions in this key sector.

Yearend Inventory-to-Sales Ratios in Durables Manufacturing

	1974	1977	1978	1979
Durables total	2.51	2.12	2.05	2.35
Primary metals	2.39	2.77	2.35	2.70
Fabricated metals	2.73	2.29	2.17	2.45
Nonelectrical machinery	2.91	2.61	2.59	2.71
Electrical machinery	2.66	2.11	2.08	2.20
Motor vehicles	1.31	0.89	0.78	1.09
Other transportation equipment	3.60	3.31	3.47	3.94
Other durables	2.26	1.78	1.81	1.96

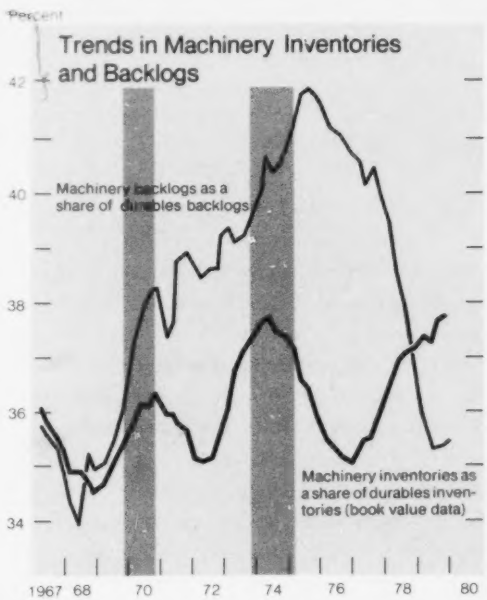
NOTE: Ratios based on constant 1972 dollars.

much faster in 1979 than during 1974. Fortunately, sales in durables manufacturing fell somewhat less sharply last year than in 1974; had they not, the climb in the past year in the inventory-to-sales ratio would, of course, have been much steeper. Nonetheless, it should be appreciated that even a relatively small further drop in real durable-goods sales—an outcome not inconsistent with recent trends in new orders—would tend to create an unsustainable inventory-to-sales ratio in durables manufacturing. For example, if sales in constant dollars were to drop just another 5% from their fourth-quarter average (in addition to the decline of 6¾% from the peak in the first quarter of 1979), the ratio of inventories to sales in durables manufacturing would, at current levels of stocks, move up to the vicinity of 2.5. Clearly, as the right-hand chart on page 8 suggests, an increase to that level would in all likelihood trigger sizable inventory liquidation.

Significantly, the climb that has occurred during the past year in the inventory-to-sales ratio in durables manufacturing is not the product of just a few isolated shifts. Rather, as the table on this page indicates, all seven of the major industry groupings in durables manufacturing experienced rising inventory-to-sales ratios over the course of 1979. It is the broadly diffused nature of the rise that is especially arresting.

Spotlight on durables manufacturing

Increases were striking in the transportation equipment area. The percentage rise in the motor-vehicles ratio was especially large; and for aircraft and other nonvehicular transportation equipment, inventory-to-sales ratios rose well above the high levels experienced at the end of 1974. The rise of ratios also was quite pronounced for producers of primary and fabricated metals. The metals sector, of course, is very sensitive to the fortunes of the market for motor vehicles. In particular, a backup of steel



PITFALLS IN INVENTORY MEASUREMENT

INVENTORY data always have been difficult to measure and interpret owing, in part, to often sizable revisions in the numbers. For example, the severity of the imbalances that began to develop during 1973 was not revealed until the annual GNP revision in mid 1974. At that time benchmark data available from the Census of Manufactures suggested that earlier estimates had both understated stocks and overstated sales. As a result, inventory-to-sales ratios were revised upward sharply. The annual revision of 1979 also resulted in a significant upward adjustment to earlier estimates of inventory stocks. But unlike the case in 1974, sales also were revised upward and the pattern of the over-all inventory-to-sales ratio was largely unaffected. Nonetheless, experience with past revisions underscores the caution that is always needed in the interpretation of preliminary estimates of inventory investment.

Moreover, users of inventory data need to bear in mind that formidable statistical problems are involved in constructing constant-dollar inventory-to-sales ratios. The procedures for doing so are complicated and necessitate certain arbitrary assumptions. For example, in the deflation exercise performed by government statisticians, it is assumed that all inventories are valued either on a LIFO (last in, first out) basis or on a FIFO (first in, first out) basis. Actually, however, U.S. businesses use a variety of accounting methods in addition to those two; indeed, a government survey conducted in late 1978 indicated that 45% of all manufacturers did not use either LIFO or FIFO. An individual firm, moreover, is not likely always to employ the same accounting method for inventory valuation. In particular, there are increasing incentives in today's inflationary environment to switch to the LIFO method. Commerce Department statisticians seek through surveys to determine what changes are occurring in the use of inventory accounting methods but their knowledge is never perfect.

A further complication arises in the conversion of LIFO-valued stocks to constant dollars. Since statisticians do not have direct information on the age distribution of inventory stocks at any point in time, they again have to hypothesize. And finally, the basic price indexes—obtained from a detailed monthly sampling of producer prices—suffer from many deficiencies in their use in the deflation process itself, including coverage and weighting. All these problems of deflation—and indeed of basic measurement—simply underscore the fact that knowledge of inventory conditions is always plagued by an element of uncertainty.

stocks occurred in some lines, and this was related to the cutbacks last year in automobile and truck output.

Interpreting trends in the machinery area, where the inventory-to-sales ratio rose last year to the highest level since the last recession, presents a special challenge. The rebuilding of machinery inventories was rather slow to get under way after the last recession—a trend that mirrored the sluggish recovery of capital-goods activity generally. Since 1977, however, machinery inventories (electrical and nonelectrical combined) have grown quite rapidly both absolutely and, as the chart on page 9 shows, as a share of total inventories in durables manufacturing. That the machinery share should rise as a cyclical expansion matures is normal. What is somewhat puzzling is that the machinery share of inventories should have risen as sharply as it has, considering the notably dissimilar movement shown by the machinery share of order backlogs in durables manufacturing. That

latter share, as can be seen from the thin line in the chart on page 9, has plummeted since 1975 and in 1979 was at its lowest level in ten years. To be sure, the dollar total of machinery backlogs has been rising, reflecting a continuing excess for machinery producers of new orders over shipments. But the rise of backlogs in machinery has been less pronounced than in durables manufacturing generally.

How to interpret these conflicting signals is unclear. The fact that an especially large climb appears to have occurred in aircraft backlogs in recent years (swelling over-all durables backlogs) may explain part of the mystery. But it doesn't explain it entirely. It is also conceivable, of course, that a great deal of orders overbooking occurred in the machinery area prior to the last recession (when delivery worries were acute) and that consequently the relatively slow growth of machinery backlogs in recent years is not particularly worrisome. But that is not certain. The fact is that the machinery area is plagued by considerable ambiguity. Thus, a hasty dismissal of the sharp rise in the machinery industry's inventory-to-sales ratio during the past year would seem unwise.

Questioning an assumption

All in all, what the foregoing analysis suggests is that it seems appropriate to question the common assumption that inventories are generally well balanced. And, in fact, it should be clear that this assumption cannot be as readily accepted today as it was a year ago or even a half year ago.

The broadly based rise in inventory-to-sales ratios in durables manufacturing—typically the area of the economy with the greatest cyclical vulnerability—warns against complacency. While it would certainly be premature to sound an alarm about dangerous inventory imbalances, it does seem probable that an inventory adjustment in durables manufacturing looms ahead in the event that demand weakens even moderately further.

Sequences in the Inflation Cycle

The following article is by Geoffrey H. Moore, Director, Center for International Business Cycle Research, Rutgers University.

ECONOMISTS, along with almost everyone else, have been slow to recognize turning points in the inflation cycle, either on the upside or on the down. We haven't lacked for opportunity. According to a chronology established a few years ago, downswings in the rate of inflation that cut the rate by at least two percentage points and lasted at least a year have occurred eight times since 1947. All told, the downswings have occupied twelve years out of the 32. Those downswings have reduced the inflation rate as much as the intervening upswings have raised it.

This last statement may seem surprising. Nevertheless, in 1947 and again in 1950 the rate of inflation was about as high as it is now. Between then and now it went down and up intermittently. But neither the upturns nor the downturns were recognized promptly.

The most recent upturn came in the spring of 1976. At that time the CPI was rising at an annual rate of about 4½%, which compared favorably with its 12½% rate in 1974. Since then the rate has been rising almost continuously How soon was the 1976 upturn recognized? You will find no mention of the turn in either the January 1976 or the January 1977 *Economic Report of the President*. In fact, in the latter report the forecast was that the inflation rate in 1977 would remain about where it was in 1976. Since Presidential reports have not been noted for pessimism, perhaps this is not surprising, but it is also true that private forecasters were slow to recognize a worsening of the inflation rate after the spring of 1976.

The lag in recognizing the 1976 upturn was not just an aberration. Joseph Livingston of the *Philadelphia Inquirer* has been collecting economists' forecasts of the CPI and other factors for many years. Between 1947 and 1976, of the sixteen cyclical turns in the rate of change in the CPI, only twelve were recognized by the forecasters at all, and at ten of the twelve, including 1976, the forecasts lagged. Businessmen, in forecasting their own price situation, may do somewhat better. At the end of 1975, for example, the Dun and Bradstreet survey of manufacturers, wholesalers, and retailers showed a decisive upturn in the percentage expecting prices to rise, and this condition persisted thereafter. Nevertheless, at previous turns in the inflation cycle it is difficult to find similarly timely shifts in the price expectations reported in this survey, so this favorable showing in 1975-76 may have been something of an accident.

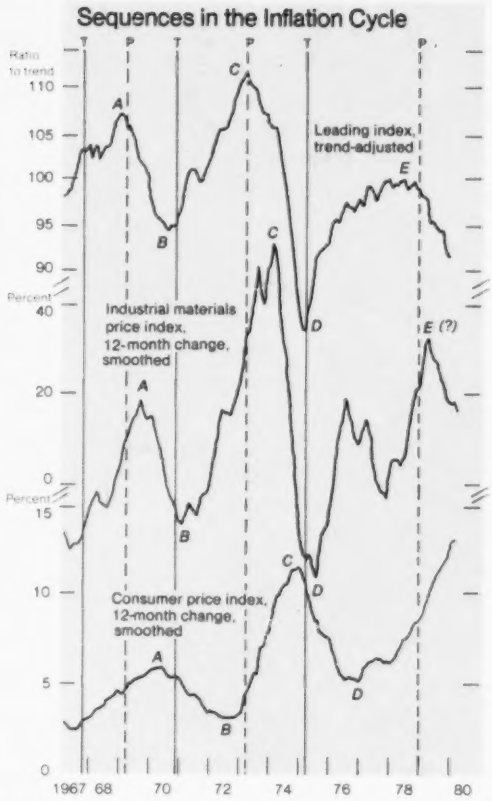
Identifying a new trend

Assuming that it is of interest to identify promptly a new trend in the rate of inflation, whether favorable or unfavorable, what can be done about it? One approach, which has had some success in the field of business cycles, is to consider what persistent types of sequences in the inflation process might be expected and to examine the data bearing upon them. A well-known fact of life in this regard is that prices in some markets respond much more promptly to demand/supply conditions than in other markets. Prices in auction markets, for example, can be expected to register changes in underlying conditions more promptly than prices that are set by custom, by contract, or by some formal administrative process. Prices in which there

is a large labor cost element can be expected to be more sluggish than those in which materials costs are a bigger factor. Hence it is reasonable to look within the price system to find the most sensitive prices and see whether they do indeed move ahead of the general level of prices.

The same idea can be pushed a step farther by considering demand/supply factors themselves and picking out those that give the earliest warning of a change. In the construction field, housing starts have a well-documented tendency to react promptly to a shift in the availability and cost of mortgage financing, and this in turn affects lumber prices. Again, when the volume of new orders placed with manufacturers declines, some prices are likely to give way. The weakness may be reflected in larger discounts or other concessions on the products ordered, or it may show up in the prices of the materials used in producing the products. When the money supply tightens, interest rates rise, and credit is restricted, decisions to hold or liquidate inventories or to proceed with or postpone investment projects must be reconsidered, and the actions taken will doubtless affect prices paid or offered. In general, many of these factors are represented by the so-called leading indicators, although these indicators were selected in the first instance because of their relevance to forthcoming changes in the volume of economic activity rather than in the price level.

The chart on this page illustrates this kind of sequential system and shows how it has performed during the past dozen years.* The bottom line is the rate of inflation, as measured by the twelve-month percentage change in the



NOTE: Vertical lines are peaks (P) and troughs (T) in the growth cycle (Center for International Business Cycle Research, Rutgers University).

CPI.† The latest upswing has brought the rate from less than 5% in 1976 to over 13% as of February 1980. The middle curve shows the corresponding rate of change in an index of the prices of thirteen industrial materials, including such items as scrap steel, print cloth, and hides.

*For a more extensive analysis of this sequence both in the U.S. and in other countries see Geoffrey H. Moore, "The Current State of the International Business Cycle: A New Measurement System," in *Contemporary Economic Problems 1978*, William Fellner, ed., American Enterprise Institute, Washington, D.C., pp. 65-78.

†The method of calculating the rate differs slightly from the usual percentage change from the same month a year ago. Here we compare the current month's index, adjusted for seasonal variations, with the twelve-month average centered on the same month a year ago. Use of the twelve-month average instead of the single month's figure reduces the erratic fluctuations in the rate of change.

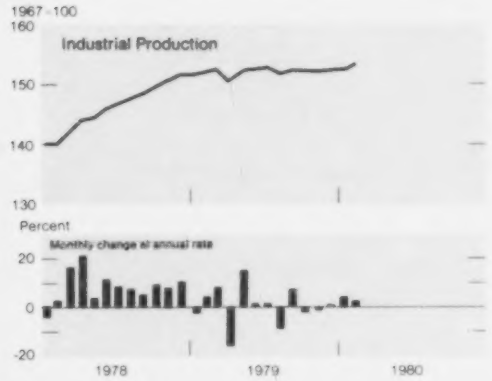
It is subject to far wider swings than the CPI (note the difference in scale) and the swings start earlier and end earlier. The top curve is the leading index published by the Department of Commerce, except that here we have removed the long-run upward trend that is built into the published index. The upswings, then, show when the index is rising faster than the long-run trend (3.3% per year); the downswings show when it is rising less rapidly than the trend, or falling. The vertical lines on the chart (P to T) mark periods when the economy as a whole was undergoing a slowdown or recession.

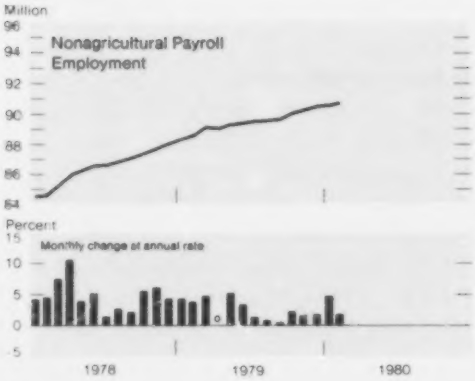
Clearly the slowdown-recessions have had an effect on all three curves, but the timing of the response is very different. The letters A, B, C, etc., help one to follow the sequence. The high and low points in the trend-adjusted leading index usually occur shortly before the economic slowdowns begin or end. The highs and lows in the rate of change of materials prices follow those in the leading index by a few months. Last of all come the turns in the rate of increase in the consumer price index.

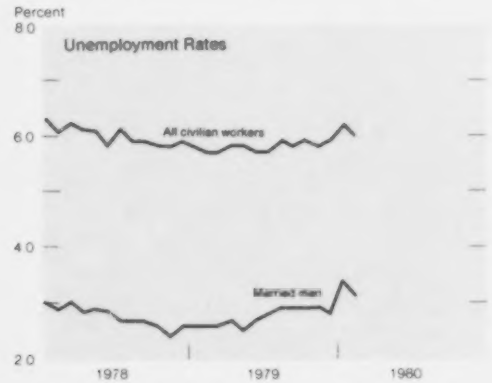
During both the 1969-70 and the 1973-75 slowdown-recessions the CPI rate rose for a year or more, giving the impression that the slowdown was having no effect on inflation. The effect showed up much sooner in the prices for materials. Watching all three curves and keeping the sequence in mind can be helpful in judging when the next turn will come. Another useful fact to bear in mind is that there has been a rough equality between the length of the swings in the adjusted leading index and the subsequent swings in the inflation rate.

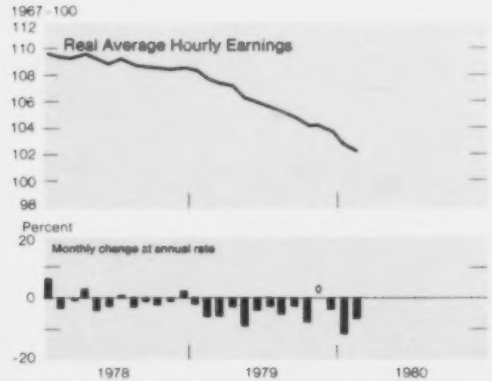
From this point of view one of the favorable developments in the current situation is the decline in the adjusted leading index since mid 1978, and the accompanying economic slowdown that began at the end of 1978. The drop in the rate of advance in materials prices since mid 1979 also is a favorable sign, although the decline has not gone very far. Note also that the materials price index sometimes follows a course of its own, as in 1976-77, when it seems to have reacted more to weakness in international markets than to domestic factors. The CPI at this writing has not yet joined the procession, but at least the usual preconditions for this long-awaited event have made an appearance.

ECONOMIC INDICATORS









NOTE: Latest plotting in each chart is for the month of February. All data are seasonally adjusted. Average hourly earnings are adjusted for overtime hours in manufacturing and for interindustry employment shifts.

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Downside Risks

HINDSIGHT is always helpful in judging the onset of a recession. Indeed, it is only now, in mid spring, that most observers are beginning to concede that a cyclical slide in output and employment probably has been under way for some time. And the evidence thus far—as opposed to false alarms a year ago—is convincing.

Housing starts have fallen by 45% in the last six months to a level only slightly above their 1974-75 lows, and almost half of this drop occurred in March. Automobile markets also have sagged noticeably further, and in mid April sales plunged to a level registered in the depths of the last recession.

To be sure, housing and auto markets both have been in the throes of cyclical adjustment for well over a year. Now, however, that adjustment is in the process of widening. Retail sales other than autos have dropped in nominal terms over the February-March period; especially sharp falloffs occurred in discretionary purchases such as those at furniture, appliance, apparel, and general merchandise outlets. At the same time, aggregate statistics on employment, orders, shipments, and production all show a cautious business sector responding quickly to the fragile state of consumer markets. For example, industrial production registered a sizable and broadly based drop in March following a small decline in February. Factory orders for durable goods also fell in March to levels below the January reading, and the growth of shipments has either declined or turned negative in most durable-goods industries.

Judging the likely ultimate severity of recession is always difficult at a stage of inception. The broad consensus among analysts still is that the recession will be moderate in character —on the order of a 2%-to-3% decline in real

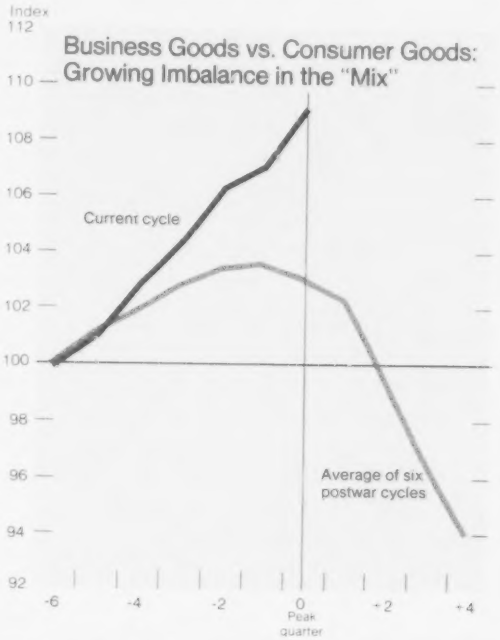
GNP as against a drop of nearly 6% in the last recession. It may turn out that way, but today's turbulent environment argues for a closer look at the risks associated with the orderly unfolding of an "average" recession.

One of the greatest risks to the outlook appears to lie in the household sector. Pressured by the soaring cost of necessities, consumers have been reducing the amount of their saving relative to after-tax income. As a result, the personal saving rate has fallen from the postwar average of 6% to the current level of roughly 3½%. An attempt by households to return to a more "normal" saving rate—touched off by either longer-term perceptions of "life-cycle" saving* or shorter-run problems of a weakening economy—would be translated quickly into a sharp drop in discretionary purchases.

As if to underscore the potential vulnerability of the household sector, the latest survey conducted by the University of Michigan showed consumers to be more pessimistic about the economy than at any other time since the end of World War II. Moreover, that survey was completed largely before the program of credit restrictions was announced on March 14. Significantly, many retailers believe that confusion generated by restrictions on consumer credit has adversely conditioned consumer psychology and is now acting as a forceful depressant on household spending, especially in the credit-sensitive durable-goods category.

Adding further to the likelihood of a sharper-than-expected consumer retrenchment is the abrupt turnaround in housing markets. For several years now, home owners have been chalking up huge capital gains on their properties—and tapping those gains in many instances to support traditional consumption patterns. Now, with housing prices generally on the decline and the volume of transactions in housing markets sharply curtailed, that support for consumer spending has been markedly reduced.

A sharp drop in consumer spending could, of course, lead quickly to a backup of inventories, and historically, a recession's severity has hinged importantly on the efforts required to remove inventory overhangs. Evidence is now beginning to suggest that excess stocks may be developing



NOTE: Production mix is calculated as business-equipment output relative to consumer-goods output (based on FRB industrial production index). Peaks are those designated by the National Bureau of Economic Research for the over-all economy; the peak for the current cycle is designated to be the first quarter of 1980. Cycles are indexed to equal 100 at six quarters prior to the cyclical peak.

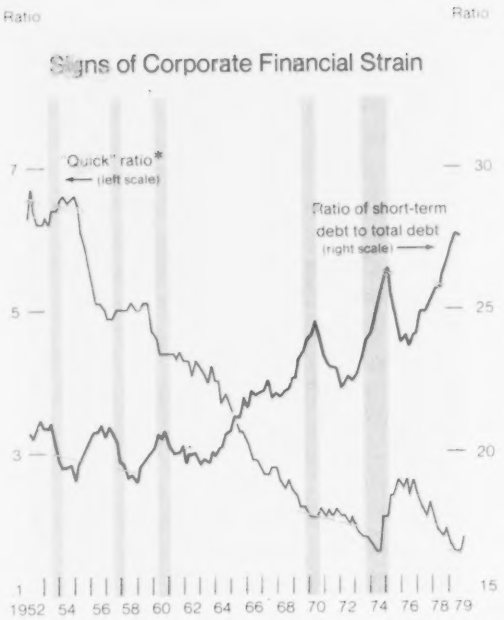
*A concept which stresses the planning of consumption and saving over long periods of time—including both working years and retirement. Thus, for example, young adults tend to spend freely and go into debt whereas the middle aged are more concerned about putting aside savings for, say, college expenses or for retirement years. To the extent that such a planning process has been interrupted by unforeseen events—such as below-normal saving of the last several years—a compensating correction eventually will be required in order to return to the life-cycle profile.

even without further consumer retrenchment. For although the economy's aggregate inventory-to-sales ratio is not flashing danger signals at present, there are already signs of imbalances in the durable-goods manufacturing sector. Since this sector has traditionally been cyclically vulnerable, risks due to inventory overhangs are increasing.

At present, there are few signs of imminent weakness in business capital spending. Indeed, most investment indicators do not suggest any sudden deterioration of outlays on plant and equipment. Moreover, there is a distinct absence of the speculative excesses that were an important element of the capital-spending collapse of 1974-75. Still, there are reasons to be cautious about the outlook for capital spending. Such spending is sensitive to the balance between business and consumer demands—the economy's production "mix"—and herein may lie a potential trouble spot.

As the chart on page 2 indicates, a recession is typically preceded by a growing excess of business-equipment production relative to the output of consumer goods. But, as the chart suggests, over the past year and a half the margin of business equipment relative to consumer goods has gone far beyond that of the average of postwar prerecession periods. Indeed, the path traced since mid 1978 resembles quite closely that leading up to the 1974-75 recession. Thus, capital-spending prospects are not entirely reassuring, and clearly there are some risks of a significant cyclical disruption in this sector.

Comparisons with 1974-75 also appear relevant in appraising the financial position of the business sector. While the strains on household balance sheets have received more extensive publicity, the pressures on business liquidity may be equally important in determining the severity of the current downturn. The chart on



*The "quick" ratio is defined as corporate holdings of cash and U.S. government securities as a percentage of current liabilities. The shaded areas correspond to recessions as determined by the National Bureau of Economic Research.

this page depicts two different measures of such pressures in the nonfinancial corporate sector: the "quick" ratio (holdings of cash and U.S. government securities as a percentage of current liabilities) and the ratio of short-term debt to total debt. As the chart shows, business holdings of highly liquid assets as a percentage of current liabilities are now back down to the levels last seen on the eve of the 1974-75 recession. Moreover, the short-term proportion of business debt is greater now than it was then.

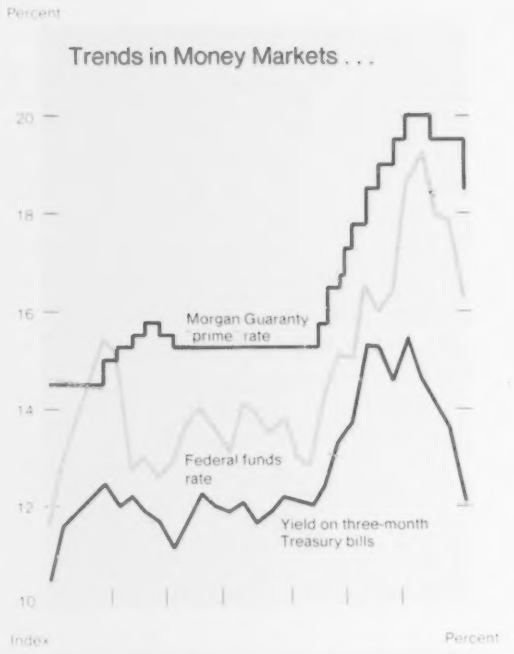
All this is not to say that the business sector is currently under greater financial strain than it was at the start of the last recession, since both of the series in the chart on this page clearly have been undergoing longer-run changes which complicate the interpretation of their cyclical movements. Despite this qualification, however,

the declines in corporate liquidity which have been occurring over the last several years imply that businesses decidedly are more dependent on their ability to borrow now than they were in earlier periods of cyclical decline. Furthermore, as the recession unfolds, business credit needs could expand temporarily if inventories began to pile up just as sales and cash flow dropped.

Many other uncertainties, of course, cloud attempts to divine the recession's severity. For example, international financial strains are likely to be caused by the OPEC current-account surplus, which is estimated to be in excess of $100 billion in 1980. Financing payments imbalances, particularly among nonoil developing nations, will require a recycling effort much broader than relying, as in the past, on commercial banks. Both the World Bank and the International Monetary Fund—as well as OPEC nations themselves—need to play a larger role. In addition, growth prospects abroad are uncertain. At present, there are no distinct signs of weakening evident in most other major industrial countries; however, they do seem likely to experience reduced economic growth rates in the year ahead. This, of course, decreases the chances that a relatively strong export sector could moderate the U.S. downturn.

There are, of course, some offsets to these downside risks. The abnormally large amount of tax refunds currently being received by U.S. households plus the 14% increase in Social Security benefits effective in June should help to bolster consumer spending. Similarly, the emerging weakness in private demands could be offset at least in part by increased defense outlays later this year.

Finally, and perhaps most importantly, interest rates have declined dramatically in recent weeks from the historic levels which they reached in March and early April. By April 30, yields



NOTE: Federal funds, Treasury bills, AA bonds are Monday-Friday averages; S&P 500 is Wednesday close.

on three-month Treasury bills had fallen by over six percentage points, while long-term bond yields were down about two percentage points. The Fed's willingness to let interest rates decline is entirely consistent with its policy of focusing on the achievement of its monetary growth targets, since the money supply numbers recently have been coming in below the lower bounds of their target ranges. The resulting sharp reduction in market interest rates has provided welcome relief both to lenders and to borrowers. But monetary policy works with long and variable lags. Moreover, the recent weakening of the dollar in the face of the sharp fall in domestic interest rates suggests that the Federal Reserve could become constrained once again by the confluence of domestic and international considerations. In any case, despite the recent reduction, interest rates are still very high for a recession period. Clearly, the economy should be feeling the effects of financial stringency for some time.

Because of that likelihood and because of the unusual features of the present economic situation, the downside risks at this juncture should hardly be judged as insignificant. Indeed, the chances of a severe recession—such as in 1974-75—are probably on the order of one in three.

Applying Controls on Federal Credit Programs

BURIED in the budget message sent to Congress in January is a proposal to establish limits on the loan and loan-guarantee programs of the federal government. The vast majority of those programs operate outside the budget and have never been subject to systematic Congressional review.

The Administration's proposal, not surprisingly, has attracted little attention; major interest has centered, instead, on the search for ways to cut on-budget programs and the deficit. And yet, because credit activities have been growing more rapidly than budget outlays themselves, they cannot be ignored in any serious effort to reduce government claims on resources.

Recognizing that need, the Administration once again called for controls on federal credit activity when it presented its revised fiscal-1981 budget in late March. At that time, it went several steps beyond the January initiative—advocating that controls on federal credit activity be broader in coverage, and that loan-guarantee commitments and direct-loan obligations be cut some $4 billion (or roughly 3%) in fiscal 1981 from the level projected in January.

The broad aim is to bring into the budget process the loan and loan-guarantee programs that have mushroomed, in large part, because they have been outside budgetary control. Specifically, the proposal is that Congress use annual appropriation bills as the vehicle for limiting new direct-loan obligations and new loan-guarantee commitments. Moreover, for fiscal 1981, the Administration has recommended limits for many individual programs and for the total volume of credit that would be advanced. Thus, binding ceilings on many credit programs would be set in much the same way as authority is now set for those spending programs that are on-budget. And the credit budget would be reviewed in Congress just as aggregate budget outlays are reviewed. All of this assumes, of

The Growth in Federal Credit Programs

(Billions of dollars)

	Direct loans		Guaranteed loans	Sponsored-enterprise loans	Total
	On-budget	Off-budget			
1970	3.0	—	8.0	5.2	16.1
1971	2.0	—	16.1	−1.7	16.5
1972	3.0	—	19.8	0.1	22.9
1973	0.9	0.1	17.7	8.5	27.2
1974	3.3	0.8	10.5	11.2	25.7
1975	5.8	7.0	8.7	5.6	27.1
1976	4.2	6.7	11.2	4.9	27.0
1977	2.6	9.0	14.0	11.7	37.3
1978	8.6	11.2	13.9	25.2	58.9
1979	6.0	13.6	26.1	28.1	73.8
1980(est.)	6.1	16.6	33.4	15.8	72.0
1981(est.)	−0.6	16.6	41.4	13.5	71.0

NOTE: Guaranteed loans are adjusted for those guaranteed by more than one agency and for those held as direct loans by the federal government. Sponsored-enterprise loans are adjusted for loans between sponsored enterprises, for direct loans to sponsored enterprises by government agencies, and for sponsored-enterprise loans that are guaranteed by the federal government.

course, that Congress responds favorably—an outcome that looks promising in view of the House Budget Committee's recent recommendation that an aggregate target for federal credit activity be included in upcoming Congressional budget resolutions.

Appropriation controls and a formal credit budget, to be sure, would only mark the beginning of an effort to curb the growth of federal credit activities. It should be noted that the Administration's proposed reductions in the volume of federal credit extensions for next year are quite modest. As a consequence, it may take years for appropriation controls to bring about significant reductions in programs that may be duplicative or may no longer be needed. Still, such reductions would stand little chance of being realized unless review procedures of the type now being proposed are put into effect.

Funds advanced under federal auspices—encompassing direct loans by federal agencies, federal guarantees of private lending, and credit advanced by government-sponsored enterprises—have increased sharply. In the past year, in fact, credit extended under federal auspices totaled $74 billion—more than two and a half times the amount in 1976 (table on this page). And large increases in such credit seem likely in coming years. By the end of fiscal year 1981, the volume of federal and federally assisted credit outstanding is projected to rise to about $670 billion—more than triple the level of outstandings at the end of 1970 (chart on page 7).

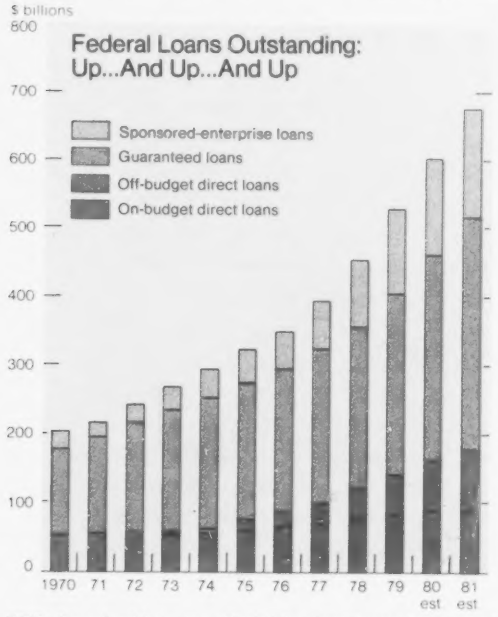
All but a very small portion of this credit has come on top of the borrowing required to finance the large cumulative budgetary deficit of the past ten years. As both the deficit and the credit programs have grown, Washington's preemptive control of credit supplies has increased dramatically. Federal and federally assisted borrowing as a share of total funds raised in credit markets rose to 25% annually, on average, in the past decade—up from 18% in the 1960s.

Direct Loans

As is indicated in the chart on page 7, the growth of direct loans has been dominated by those made off-budget. Direct on-budget loans have grown at a relatively modest pace, with the amount outstanding increasing 28% between fiscal years 1976 and 1979. But off-budget loans have more than doubled during this period.

This change from on-budget to off-budget

financing has come about largely as a result of the operations of the Federal Financing Bank (FFB). That agency is an off-budget arm of the Treasury Department established in 1973. It supports the activities of those federal agencies, such as the Export-Import Bank and the U.S. Postal Service, which previously had borrowed in credit markets under their own names—invariably at higher cost than the Treasury paid on its general obligations. In addition to acting as a financial intermediary between the Treasury and such agencies, FFB buys pools of loans from on-budget agencies—thus putting such loans off-budget. The rapidly expanding credit programs, for example, of the Farmers Home Administration (FmHA)—an on-budget agency which extends subsidized home-ownership and diverse-purpose loans in rural areas—have been financed off-budget largely in this way. Significantly, gross new credit extended by FmHA each year ranged between $200 million and $500 million until the early 1970s. Since then, however, FmHA credit has surged—rising to $3.3 billion in 1974; to $8.0 billion in 1977; and to an estimated $14.9 billion in the current fiscal year.



NOTE: Guaranteed loans are adjusted for those guaranteed by more than one agency and for those held as direct loans by the federal government. Sponsored-enterprise loans are adjusted for loans between sponsored enterprises, for direct loans to sponsored enterprises by government agencies, and for sponsored-enterprise loans that are guaranteed by the federal government.

Besides engaging in fund raising for government agencies, the FFB also is authorized to purchase guaranteed loans. Rather than doing that, however, it makes loans directly to borrowers backstopped by agency guarantees—in effect converting such guarantees into direct loans outside the budget. Electric power cooperatives and foreign governments buying arms in the U.S. are the principal borrowers under this arrangement.*

The key role played by FFB in the growth of off-budget lending is evident from the fact that its direct lending in the current fiscal year (estimated at $16.2 billion) will account for all but about 2% of off-budget direct loans (table on page 6). Strikingly, the direct-loan portfolio of the FFB is projected by the Office of Management and Budget to rise to $63 billion by the end of this fiscal year and to $80 billion at the end of the year that begins October 1. More than half of these amounts represent loans originated by FmHA.

Guarantees

A second area of marked growth in federal participation in credit markets has been guaran-

*Because it was feared that the Treasury's FFB might limit agency loan and loan-guarantee programs, the statute creating FFB gave it no oversight role. By law, FFB is required to meet agency requests for funds, and thus it makes no judgment about the creditworthiness of borrowers. Irrespective of the creditworthiness of borrowers, the rate FFB charges is an eighth of a point over comparably dated Treasury issues.

teed loans other than those directly placed with FFB. The rise in the outstanding total of guaranteed loans during the 1970s approximated $145 billion. What's more, a further increase of about $75 billion is in prospect in the next two years.

The major use of loan guarantees over the years has been to support housing through the familiar VA-FHA mortgage-underwriting programs. But, in recent years, the range of activities covered by guarantees has increased considerably. Whereas in the early postwar period housing programs accounted for almost all loan guarantees outstanding, they now account for about two thirds of the total.

New programs have proliferated, often with explicit interest-rate subsidies—covering, for example, loans for students, community development projects, small business enterprises, and many others in over 150 different programs. In many cases, guarantees have been extended to borrowers who have posed greater than ordinary risks, because of either the potential for default or the lack of collateral. The major problem program, of course, has been student loans, where default rates have been very high.

More recently, a new type of guarantee has emerged—covering single ventures such as the Washington subway system and synthetic fuel plants or a single borrower such as Amtrak, Conrail, Lockheed, and Chrysler.

Much of the lending under federal guarantee programs, to be sure, would have occurred anyway and thus such programs cannot be said to affect the economy dollar for dollar as much as direct Treasury borrowing does. This is certainly true in the case of the traditional home-mortgage programs, which paved the way for self-amortizing, relatively low-downpayment mortgages and for the growth of private mortgage insurance. Still, by offering fat interest-rate subsidies* and by extending guarantees to special risks, the federal government has surely brought new borrowers into credit markets.

Sponsored Enterprises

Still another means by which the federal government is instrumental in allocating available credit supplies is through the activities of government-sponsored enterprises—principally, those that support the home-mortgage market and extend credit to farmers. Although established, chartered, and supervised by the federal government, they are all privately owned and thus are excluded from the budget review process and the budget totals.

Yet sponsored enterprises have close ties to the federal government. By law or custom, they consult with the Treasury in planning the marketing of their debt. And federal sponsorship has provided them with characteristics that distinguish them from strictly private institutions. For example, like Treasury securities, the securities of sponsored enterprises are exempt from registration with the Securities and Exchange Commission. Too, their securities are issued and payable through the facilities of Federal Reserve banks; they are available for open-market purchase by the Federal Reserve in implementing monetary policy; and they are among the eligible assets of federally chartered financial institutions such as savings and loan associations and credit unions. All of those features give the sponsored enterprises a quasi-government status in the marketplace and enable them to borrow at rates only slightly above Treasury rates. Moreover, the sponsored enterprises are backstopped by authority to borrow directly from the Treasury, and in the case of

*The Office of Management and Budget estimated that the value of interest-rate subsidies on guaranteed-loan commitments made last year was $15 billion.

each sponsored agency there is a statutory requirement that a specified number of its directors be appointed by the President.

The most important of these financial intermediaries, in terms of credit outstanding, specialize in supporting the home-mortgage market. Take the case of the Federal National Mortgage Association (FNMA). It provides assistance by purchasing home mortgages in the secondary market, thereby increasing the liquidity of the market in periods of monetary restraint. In recent years, however, FNMA increasingly has become a permanent investor in mortgages, thus taking on a much broader role in the financing of housing activity. The Federal Home Loan banks, for their part, support housing by extending advances to member savings and loan associations to enable them to meet mortgage commitments during periods of monetary restraint.

The second most important function of sponsored enterprises is credit extension to farmers through the Farm Credit Administration. This is comprised of the Federal Intermediate Credit banks, which extend production loans; the Federal Land banks, which provide capital-improvement loans; and the Banks for Cooperatives, which specialize in credit for the marketing of crops. Significantly, some 30% of the credit outstanding to farmers at present can be traced to these agencies.

With support for cyclically sensitive housing markets the principal function of sponsored-enterprise loans, it is not surpising that the volume of their loans varies considerably. Loan totals rose sharply, for example, in 1973 and 1974—when open-market interest rates surpassed ceiling rates payable on thrift-institution deposits and the normal sources of funding for home mortgages, as a consequence, were curtailed. As interest rates fell in 1975 and 1976, deposit flows were restored—reducing the need for the extensive assistance provided earlier (table on page 6).

Recently, for much the same reason, assistance to the home-mortgage market by sponsored agencies once again has been large—and it is projected to decline sharply in coming years. Even if net credit extensions by sponsored agencies, over all, fall to only one half of last year's level, however, they are still projected to remain high in historical perspective.

Moving cautiously

The Administration has excluded sponsored agencies from the proposed federal-credit budget because of their private ownership. And it has proceeded cautiously in recommending that limits on individual direct-loan and loan-guarantee programs be in the form of annual appropriations. The recommended limitations, when proposed in the January budget message, were to cover only about 45% of new direct-loan obligations and about 40% of new loan guarantees—with the remainder to be subject only to the controls provided by authorizing legislation. Revised budget proposals in March, however, call for appropriation limits to cover some 80% of new loan guarantees—the change being to bring under coverage of the program the basic mortgage underwriting activity of FHA and the mortgage-backed securities of the Government National Mortgage Association.

The Administration continued to exclude emergency credit assistance programs (such as natural disaster loans) from annual appropriations—on the theory that specific limits would hamper such programs in carrying out their responsibilities efficiently. Also excluded, among others, are the so-called entitlement programs (such as loans to veterans), under which qual-

ified recipients have a legal right to loans or loan guarantees, since such programs are uncontrollable through the appropriations process.

Despite its partial coverage, the Administration's proposal to put limits on federal credit activities is a vast improvement over present procedures. To be sure, such activities are authorized by law and subject to Congressional oversight. But for most programs, there is no annual review. Authorizations to agencies are often legislated on an open-ended basis, or contain ceilings set so high as to be no restraint. Moreover, there is little effort to make alternative choices among programs—in short, no systematic policy review of federal credit activity as a whole.

Because they escape budget scoring, such programs tend to appear costless. They are not forced into competitive trade-offs, as are budgeted outlays—and thus it is not surprising that they have grown enormously in size and in scope.

The proposed credit budget is a first—but important—step in the direction of moderating that growth. At the very least, it is an attempt to end the practice of chronic understatement of the federal government's claim on resources. It serves also to underscore that the nation's credit supply has limits—and that when certain borrowers obtain loans with federal assistance others inevitably find it more difficult to meet their credit needs.

New Focus on International Services

OVER the years, the international activities of service companies—such as banking, insurance, shipping, air transport, engineering firms—have gotten short shrift in U.S. negotiations with other countries. The main emphasis has been on exports from U.S. factories and farms and on the obstacles in the way of such shipments.

Suddenly, the focus is shifting. The U.S. Trade Representative's Office in Washington, for the first time, is making a concerted effort to persuade other nations to join in negotiations for a more coherent set of rules and procedures for handling services issues. Within industry itself, obstacles to the expansion of U.S. firms' business abroad are receiving increased attention in various forums.

A major reason for the shift in focus is the realization that services have become a major—and fast growing—activity in international markets. Awareness is mounting, too, of the need to batter down barriers to service transactions—barriers both to trade in services across international borders and to the establishment of U.S. service businesses in foreign lands.

There are no up-to-date figures measuring the size of foreign sales of U.S. service industries. But an official study covering the year 1974 placed the value at $50 billion. Analysts say the value today could easily be double that figure, despite a variety of obstacles that hamper the activities of all major service industries.

Barriers faced by service industries, in some ways, are similar to nontariff barriers faced by exporters of goods—e.g., subsidies or restrictive government-procurement policies. More important, however, are the obstacles that nations put in the way of foreign investment in service

industries. The latter are of concern to U.S. firms because the main way service industries can tap overseas markets is through foreign facilities. By their nature, services—e.g., banking, advertising, insurance—generally have to be produced where they are consumed. For this reason, exports from the U.S. account for only a small part of U.S. service industries' foreign business.

Traditionally there has been a paucity of information on the size and makeup of service-industry sales abroad. Heightened interest led, at long last, to a pioneering study by the Commerce Department—entitled *U.S. Service Industries in World Markets* and published in 1976—which for the first time attempted to identify the role of service producers.

The study distinguished three categories of commerce in services: (1) exports—or services delivered abroad by domestically based firms (e.g., transportation services, film rental); (2) services sold abroad by foreign-based branches or affiliates of U.S. firms (e.g., banking offices, advertising agencies); (3) services consumed in the U.S. by foreigners (e.g., tourist services such as lodging, food, entertainment).

Given this conceptual framework, the Commerce study estimated that U.S. service industries made foreign sales in 1974 (the year on which its analysis focused) totaling $50 billion (table on this page). Of that total, $7 billion was attributed to exports and $43 billion to sales of services abroad by overseas affiliates of U.S. firms. Repatriated earnings from the latter amounted to $2.6 billion. (As the table shows, banking offices accounted for a large part of those "sales," defined in the report as bank "operating revenues.") In addition, the study estimated that the U.S. produced $8.7 billion of services consumed by foreigners in the U.S.—mainly those associated with travel in this country and use of port facilities. These were not counted as foreign sales and are shown as a memorandum item in the table.

The Commerce report also looked at sales by foreign service industries to the U.S. in 1974 (table on page 12). It estimated the total at

Estimated Foreign Sales of U.S. Services Industries, 1974

(Billions of U.S. dollars)

Total foreign sales	$50.0*
Exports	7.0
Passenger fares	1.1
Air freight	.4
Ocean freight	1.5
Other transportation	.1
Film rental	.3
Reinsurance	.6
Contractors' fees	.5
Communication	.5
Management fees and services to affiliates	1.3
Business services to non-affiliates	.7e
Overseas affiliates sales	43.0
Banking	12.0e
Insurance and other finance	2.1
Wholesale/retail trade (value-added)	6.4e
Advertising	3.4
Franchising	1.5e
Transportation, communication, utilities	2.7e
Other†	14.9
Memorandum:	
Services consumed in U.S. by foreign nationals	$8.7
Tourism in U.S.	4.0
U.S. port and airport charges	3.5
Other	1.2

*The comparable figure for total foreign sales of U.S. goods-producing industries in 1974 was $414 billion.

†Probably largely composed of sales in hotel/motel, equipment leasing, and construction/engineering industries.

eEstimates.

SOURCE: *U.S. Service Industries in World Markets*, U.S. Department of Commerce, December 1976.

$28.7 billion–with $7.9 billion arising from imports (or U.S. purchases from foreign-based firms) and $20.8 billion arising from sales in this country by U.S.-based affiliates of foreign firms. Again, payments for travel and other services consumed abroad by U.S. nationals–totaling $8.3 billion–were excluded from the estimated sales figures.

The lack of fuller and more recent information about international transactions in services contrasts with the data available on transactions in goods, the field where U.S. and other governmental data-collection efforts have mainly focused. The relative neglect of data on services is attributable to the greater importance of goods in international commerce, as well as to the fact that services are more difficult to quantify than goods.

Information on foreign barriers in the way of services activity is also sketchy. To be sure, certain government practices, including those of the U.S., that impede commerce in various industries are widely recognized–for example, protectionism in maritime transport, or regulation of insurance and banking. Such impediments, however, have not been systematically documented. To remedy this situation, U.S. trade officials have begun a campaign, both at home and abroad, to develop an organized body of knowledge. Their aim is to prepare the way for future negotiations on services issues.

At home, trade officials began by compiling a "draft inventory" of obstacles encountered by fourteen industries in doing business abroad.* This document–a print-out running to 165 pages–was based on the 1976 Commerce Department study cited earlier, which attempted

*Accounting, advertising, auto/truck rental, banking, construction/engineering, computer services, franchising, hotels/motels, insurance, legal, motion pictures, air transport, maritime transport, tourist travel.

Estimated Foreign Services Industries' Sales to U.S., 1974

(Billions of U.S. dollars)

Total sales to U.S.	$28.7*
U.S. imports	7.9
Passenger fares	2.1
Air freight	.2
Ocean freight	3.3
Other transportation	.7
Film rental	.1
Reinsurance	.7
Direct insurance	.2e
Communications	.5
Management fees and business services	.1
Affiliate sales in U.S.	20.8
Water transportation	.4
Air transportation	.6
Other transportation	.8
Communications	—
Utilities	—
Banking	4.4
Insurance	4.5
Real estate	.5
Other financial	1.9
Hotels and lodging	.3
Advertising	.1
Accounting and motion pictures	.2
Engineering	.2
Wholesale trade (value-added)	4.9e
Retail trade (value-added)	1.7e
Other	.4
Memorandum:	
Services consumed abroad by U.S. nationals	$8.3
U.S. tourism abroad	6.0
Foreign port and airport charges	1.8
Other	.5

*The comparable figure for total foreign-company produced sales of goods in the United States in 1974 is $116 billion.

eEstimates.

—Less than $10 million.

SOURCE: *U.S. Service Industries in World Markets*, U.S. Department of Commerce, December 1976.

HIGHLIGHTS OF THE "TREATMENT" STUDY

THE International Banking Act of 1978 required the Secretary of the Treasury to report to Congress on the official treatment and competitive opportunities accorded U.S. banks by other countries. The Secretary's report,* submitted last September, found that U.S. banks have a "substantial degree of access to most financial markets abroad of importance to them, both in terms of initial entry and the powers they may exercise once entry has been accomplished." It also noted that U.S. banks "generally receive equitable treatment abroad." These favorable conclusions, however, are hedged with numerous qualifications and exceptions. Taken together, they provide a mixed picture of U.S. banks' actual treatment and competitive opportunities. Indeed, the report is an impressive source of data on foreign restrictions affecting U.S. banks.

Some of the study's key findings:

- Most major nations permit entry through branch offices, the method U.S. banks overwhelmingly prefer. But there are important exceptions, including Mexico, Canada, Brazil, Venezuela, and Australia. Many smaller nations also block entry of American banks through branch operations. Altogether, of the 141 countries reviewed, only 58 were found to permit entry through branch offices. (Entry restrictions reported in the study were those prevailing as of mid 1979.)

- The five countries mentioned above headed a list of thirteen nations most often cited by U.S. banks, in a study questionnaire, as countries where they would most like to have a presence but currently are not located, either because all entry is restricted or because they cannot enter via branches or other desired methods. The other countries are: the Philippines, Saudi Arabia, Kuwait, Colombia, Indonesia, Thailand, Malaysia, and Singapore. Ten of the countries on this list permitted foreign-bank branches in the past and nine have branches that were "grandfathered" when laws were changed. Most of these countries, however, impose special restrictions on operations of existing foreign branches.

- Besides denying branch entry, these thirteen countries* prohibit foreign banks from acquiring majority ownership or control of indigenous banks. In addition, a number of other countries that permit branches do not permit majority ownership of local institutions—among them the Netherlands, Taiwan, and the United Kingdom. Actually, limitations on equity control of indigenous banks are more pervasive than restrictions on branches. Only 47 of the 141 countries appear to have no explicit restrictions on majority ownership.

- In many of the 47 it is questionable whether a foreign bank could acquire control of a large indigenous bank. Many countries' entry policies, especially regarding acquisitions, are ambiguous. The study noted that such policies "have not often been clearly enunciated or tested, at least within the realm of public knowledge, particularly with regard to acquisitions of large banks. . . . Informed judgments suggest that, as a general matter, such acquisitions would be discouraged by most governments."

- Some countries, mainly developing nations, have regulations which discriminate against the operations of foreign banks. These include restrictions on foreign banks' acceptance of some kinds of local deposits, limitations on the number of branches, denial of foreign-bank access to central-bank discount facilities, and restrictions on the services foreign banks can offer.

Report to Congress on Foreign Government Treatment of U.S. Commercial Banking Organizations, September 1979.

*With the possible exception of Thailand.

for the first time to identify such problems. In the draft, impediments are classified in six major groupings—e.g., issues related to right of establishment, professional qualifications, direct restrictions on services trade—and their frequency in various nations is indicated. This draft is now being revised and updated in consultation with various industry groups. In the banking field, an important contribution to the updating will be certain information, supplied by the industry, which underlies the Treasury Department's recent report to Congress on foreign treatment of U.S. banks (box on page 13). When completed, the revised inventory is expected to provide a basis for sorting out issues and identifying the more serious obstacles U.S. service industries face.

At the international level, a key effort at elucidation is work being done by the Trade Committee of the Organization for Economic Cooperation and Development (OECD). In response to a U.S. proposal, that committee is doing a broad study of trade in services which is itself to develop a general inventory of obstacles and also to include pilot studies going more deeply into four main fields—construction/engineering, banking, insurance, and maritime transport. The U.S. has submitted its draft inventory to the committee, and other countries are expected to produce their own listings of obstacles—including those faced by their firms in the American market. This inquiry, its U.S. instigators hope, will lead to a broad international consensus as to the nature of problems impeding commerce in services as well as to fresh approaches to solutions.

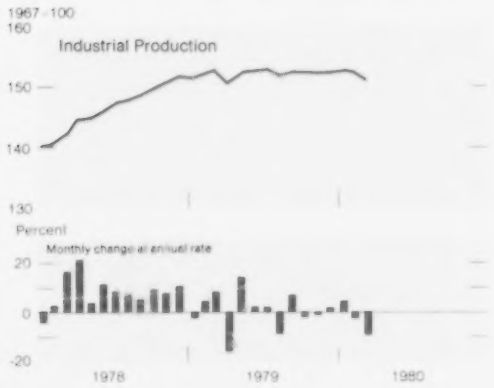
What might be done

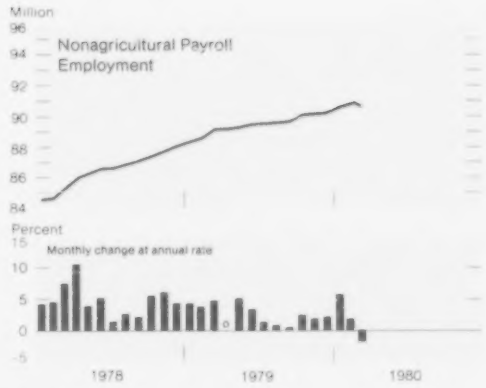
A number of approaches are being tentatively discussed. Among them, in brief:

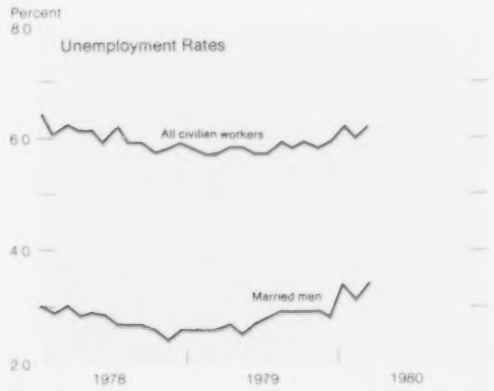
- Extension of certain nontariff codes adopted in the "Tokyo-Round" negotiations to cover services—namely, those aimed at curbing discriminatory practices arising from government-procurement policies, subsidies, and arbitrary product standards.
- Development of a code on services per se. This might establish general principles (for example, nondiscriminatory treatment), provide a framework for negotiating mutual obligations, and establish procedures for the resolution of disputes.
- Correcting weaknesses in the OECD invisibles code. This establishes a wide range of commitments with respect to trade in services. But it also affords governments wide leeway in entering reservations and these take much of the force out of the obligations.
- Addressing investment problems. Many of the issues involving services transactions are restrictions on investment. These might be given higher political priority in such forums as the OECD Investment Committee.

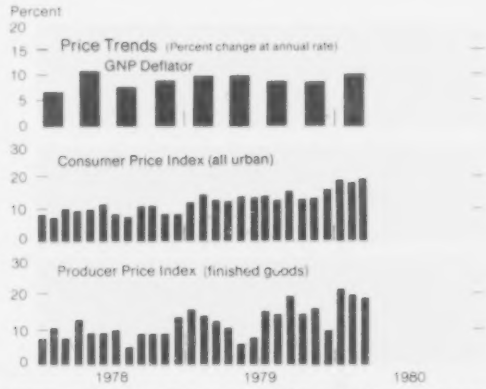
Whatever the approach, much preparatory work remains to be done. Before nontariff barriers to manufactured goods reached the Tokyo-Round table, they had been exhaustively analyzed, catalogued, and discussed by businessmen and officials from many countries. A comparable effort at education and consensus-making in the services area is just beginning. But, significantly, it is picking up momentum—at least in the U.S. More and more people in industry and government are getting involved. Commenting on the stir, one industry participant says this issue "got off the dime" late last year. Thus, though barriers in the way of services transactions have received relatively little attention in the past, the subject seems likely to become a prominent feature of U.S. policy discourse in the months and years ahead.

ECONOMIC INDICATORS









NOTE: Latest plotting in each chart is for the month of March. All data are seasonally adjusted. Average hourly earnings are adjusted for overtime hours in manufacturing and for interindustry employment shifts.

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The Recession: Sharp but Short?

FROM all appearances, the recession of 1980 is off to a fast start. The pattern has been one of growing weakness in output since January. But especially large, and broadly based, declines in economic activity appeared in the April data released last month. The output of only 2 of the 24 industries included in the index of industrial production rose in April; employment increased in only 48 of the 172 industries that make up the employment series. In both cases, the ratios were comparable to those seen in late 1974.

May readings are almost certain to show continuing weakness—given the further deterioration in car sales and in claims for unemployment benefits during the initial weeks of the month. There should be carry-over as well in output and sales data from April's drop in durable-goods orders (down 6.6%, after a 4.3% decline in March).

In fact, the recession is developing with such intensity that the Federal Reserve is responding in a variety of ways. Interest rates have fallen as dramatically as they had increased earlier in the year. The credit-control program has been scaled back. And the discount rate at Federal Reserve banks has been cut a full percentage point to 12%.

There is, of course, no assurance that the beginnings of an about-face on credit controls, or even complete removal, will restore a more normal pattern in consumer spending—since attitudes are now being conditioned by growing unemployment and associated weakness in income. However, a number of positive factors in the current situation—such as relatively well-balanced inventories and the extraordinary retreat

of interest rates—suggest that it is too early to conclude that the recession of 1980 will be as extensive as the severe recession of 1974-75.

Powerful influences were behind this spring's widespread cutbacks in output. The unusually high levels to which interest rates had risen in February and March—on top of large increases in rates last autumn—accelerated the decline in housing activity. And they made it very burdensome for firms to carry inventories—especially for those companies whose prices were not rising anywhere near so rapidly as general indexes of inflation. With bank prime rates at 20% in early April, "real" interest rates for those firms had moved into the double-digit range.

By March, moreover, signs that growth in consumer spending could not be maintained at the surprisingly fast pace of late 1979 were beginning to multiply—reinforcing the need for companies to keep stocks at a minimum. By April, in fact, retail sales in real terms had fallen an estimated 7% from their January high. And, significantly, weakness has not been confined to auto markets. Other highly income-sensitive categories of spending have shared in the decline: April sales at general merchandise, apparel, and furniture and appliance stores were down some 6% in real terms from the January level.

Apparently, fundamental factors long in the making—such as the absence of growth in real disposable income and relatively high household-debt levels—are finally taking their toll. But the restrictions on consumer credit imposed by the Federal Reserve in mid March appear to have been critical in triggering the deep cutback in sales.*

According to the surveys of retailers, the restrictions were widely misunderstood: many consumers viewed credit as unavailable; many others believed financing costs would rise to prohibitive levels. Moreover, consumer lenders in some cases did reduce lines of credit. The upshot has been a sharp cutback in sales dependent on credit in all regions of the country, including those where underlying economic trends have remained quite strong.

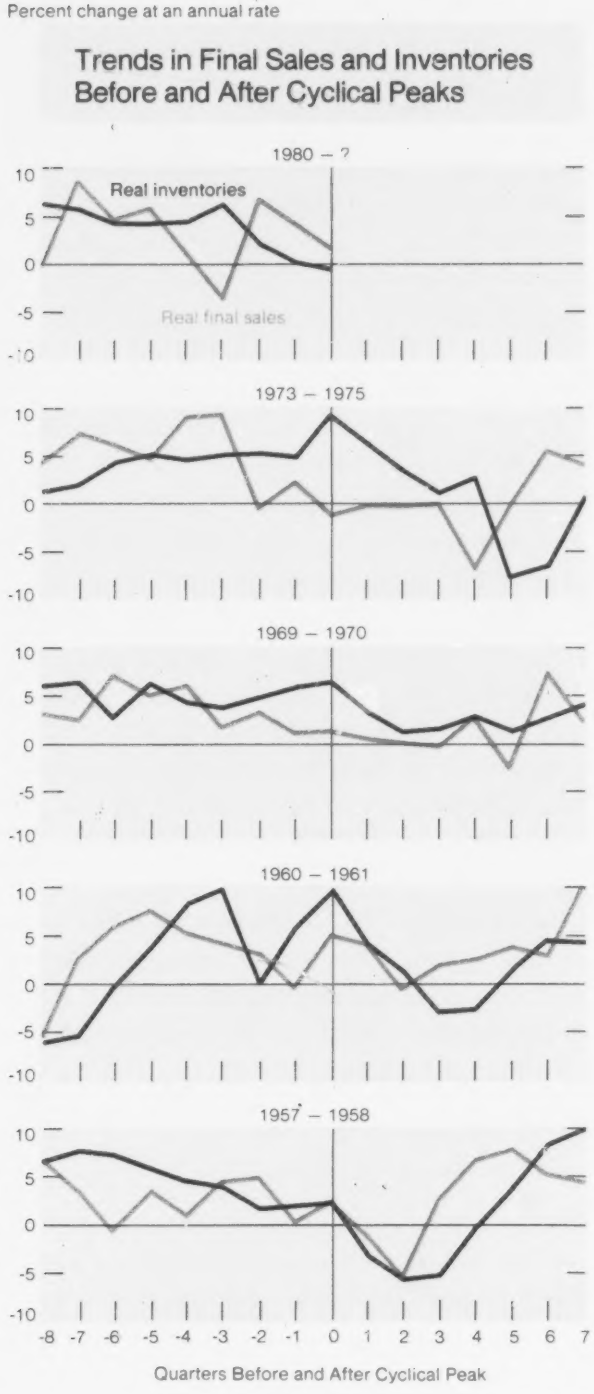
Supportive factors

One factor that would tend to limit the current downturn in economic activity is the pattern of declining inventory investment in the last year or so—a development that is in marked contrast to that in prior prerecession periods (chart on page 3). That is not to say that some industries will not be hard pressed to prevent stocks from getting out of line with sales. But it does suggest that a swing in inventory investment—since it has already been substantial—will not play so large a destabilizing role as it typically has in past recessions. Significantly, in the six previous post-World War II recessions, the swing in inventory investment accounted for at least half of the total decline in output—and, in three of the recessions, it was as large as the entire decline.

The possibility of a major inventory cycle also has been muted by this spring's decline in interest rates: by late May, three-month Treasury bill yields, for example, were in the vicinity of 8%—some 7½ percentage points below late-March readings. Rates on long- and intermediate-term securities have also fallen sharply. In absolute terms, however, the declines in such rates have been nowhere near as large as those on short-term securities, as is typical in interest-rate cycles. Thus the yield curve—which had

*The restrictions took the form of a requirement that providers of revolving-type consumer credit set aside 15% of any increase in credit above the March 14 base in a noninterest bearing account. The set-aside was reduced to 7½% on May 22.

Percent change at an annual rate



NOTE: The changes shown are for "real" sales and inventories. The peaks of the last four cycles were: fourth quarter 1973; third quarter 1969; first quarter 1960; third quarter 1957. The current cycle was assumed to have peaked in the first quarter of 1980.

been inverted since the summer of 1978—once again has taken on a normal upward slope.

U.S. money-market rates have come down so sharply that the large positive spreads over rates abroad that had prevailed in late March (8½ percentage points and 6 percentage points vis-à-vis German mark and yen rates, respectively) have disappeared. Consequently, the U.S. dollar has weakened considerably in foreign exchange trading. The slippage was orderly at first, but by late last month became pronounced despite substantial central-bank support.

For the moment, that development seems to be of secondary importance to the Federal Reserve—which has stressed since October 6 close control of monetary growth rates. Just as high-side growth in the aggregates was the key factor behind Federal Reserve encouragement of higher short-term rates, first in October and later in February and March, the slump in the aggregates that began in late March was seen as a justification for the Fed to allow open-market rates to fall as sharply as they have in the past two months. Significantly, despite the rebound in the key aggregates in early May, M_{1b} (consisting of currency and checking-account-type deposits) declined at an annual rate of 6% in the four weeks ended May 21 from its four-week average thirteen weeks earlier. This is a full 11 percentage points off the 5% growth target established by the Federal Open Market Committee for M_{1b} for the first half of the year. Factors such as changing seasonals and the pattern of Treasury deposits can explain only a relatively small portion of the gap. Rather, the decline in the aggregates seems to be another reflection of the extraordinary weakness in economic activity in recent months.

In addition to lessening the risk of a major inventory cycle, recent declines in interest rates have reduced other risks as well—including the

risk that financial strains might lead to widespread bankruptcies. Certainly the stress on thrift institutions, many of which incurred losses in the first quarter of this year, has been relieved. They are in a much better position to compete for savings in the present rate environment—in sharp contrast to that early in the year when their experience was one of substantial outflows of funds.

Also, declines in deposit rates should go a long way toward reinforcing the trend to lower mortgage costs for home buyers. At savings and loan associations, the nation's major mortgage lenders, for example, some 32% of total deposits are in six-month money-market certificates (and another 10% in other interest-sensitive accounts). The rate on such certificates—which is tied to six-month Treasury bill rates—had been in the 12% vicinity in November, and these deposits were being rolled over at rates close to 9% late last month. In coming months, as, say, March's 15% certificates mature, thrift institutions will continue to see a progressive lowering in deposit costs. A sustained improvement in housing starts, to be sure, is still some months off—given the large inventory of unsold homes on the market (a 10½ months' supply at the March sales rate, a record high). But the preconditions for a turnaround in home building are rapidly moving into place.

The burden of corporate indebtedness—much of which is on a floating-rate basis—has also been substantially reduced. Lower long-term rates, moreover, once again have given corporations a needed opportunity to restructure their debt and reduce the very high percentage of short-term obligations acquired in the past few years.

Despite the improved financial climate, some decline in plant-and-equipment outlays is reasonable to anticipate as capacity utilization rates slip and as profits weaken. Indeed, recent trends in capital-goods orders and construction contracts seem to indicate that a response to these key determinants of capital spending has already begun. Nevertheless, the prospect is that investment spending will be better maintained in 1980 than in past cyclical declines—largely because of the absence of speculative excesses in investment spending in recent years.

Surveys of spending plans also suggest that the contraction in investment will be relatively mild for a recession period. The latest of these —the McGraw-Hill survey, even though it was taken in the early-spring period of extreme financial uncertainty—pointed to an increase in plant-and-equipment outlays of 12% in 1980, an increase that would imply a modest decline, at most, in real outlays. A surprisingly optimistic reading of upcoming investment spending was the 30% increase in first-quarter capital appropriations indicated by the Conference Board's canvass of the nation's 1,000 largest manufacturers. Such an outsized increase is unlikely to continue—given the weakness in end-product markets that has developed in the intervening months. But the finding does caution against underestimating the underlying strength in investment demand after several years of slow growth in the nation's capital stock.

Less pressure on prices

Another positive development was the drop in the rate of increase in consumer prices to 0.9% in April from 1.4% per month during the first three months of the year. Behind the improvement was a stabilization in gasoline and other oil-product prices and the general depressing impact on inflation of the weakening economy. To be sure, the annual rate of increase in the CPI is likely to remain in the double-digit

range through June as it continues to pick up the increases in mortgage interest rates that occurred earlier this year. By the middle of summer, these increases will have worked through the index—and, with the economy in recession and mortgage rates falling, increases in the CPI are likely to slow dramatically and drop well into the single-digit range.

The major negative element in the picture, of course, is that the downward trend in sales—which undoubtedly was given a shove by consumer-credit controls—will tend to cumulate and spread in coming months. Successive declines in income and employment will tend to beget continued weakness in sales, and so on in a chain process. Sales of autos, moreover, will continue to reflect the special depressant of high gasoline prices. Congress' reluctance to go along with the President's proposed 10-cent-a-gallon gas tax (in the form of oil-import duties) will moderate the rise in gasoline prices that was in store for late spring and summer. But a significant improvement in domestic-make auto sales remains constrained by the limited capacity to produce the most-fuel-efficient models currently in demand.

Thus, for some months to come, the economy's direction seems set. However, forces that will arrest the slide are now moving into place a lot more quickly than anyone had reason to expect a month or so ago. No one can be certain how soon an accommodative monetary policy (in terms of interest-rate levels) will achieve that end. But the vast change in money-market conditions has reduced the risk that what is shaping up as a relatively deep drop in economic activity this quarter, and presumably next quarter as well, will be prolonged.

The Defense of Lifestyles

OVER the past year, much has been made of the American family's new penchant to spend rather than to save. Old habits of thrift for tomorrow are said to have been jettisoned in favor of a desire to spend for today.

Statistics on household saving seem to bear out that notion. Even though personal saving recently has moved up to 4 cents of each dollar of after-tax income (after slumping to about 3½ cents), the saving rate is still well below the 6% rate that has prevailed on average over the postwar period.

A number of explanations for the decline in the saving rate have been put forth. These have ranged from longer-term considerations such as the inhibiting effects of government programs (e.g., Social Security) to the distortions bred by the inflation of the last several years—the buy-now-before-the-price-goes-higher syndrome.

An alternative explanation for the slump in saving can be found by examining trends in the composition of household spending. Consumer budgets, it turns out, have not been swollen in areas where the most discretion for inflation-induced buying would seem to lie—such as cars, furniture, and appliances. This does not deny the fact that anticipatory buying has occurred. It simply suggests that such buying has not been a dominant feature of recent consumer behavior.

The analysis of budgets does show, however, that consumers have been spending more and more of their income to meet rising costs of cer-

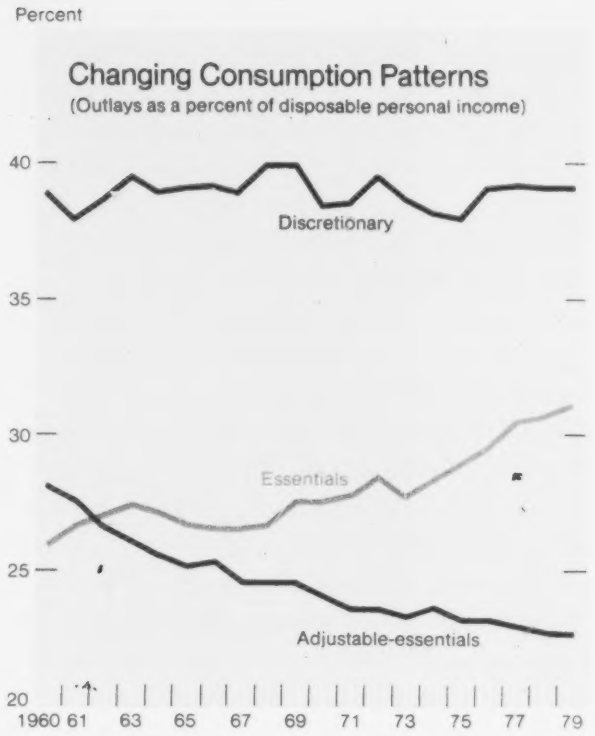
tain basic necessities—shelter, utilities, and medical outlays. At the same time, individuals have resisted a compensating reduction of spending in other areas as a means of accommodating such strains. Over-all saving has suffered, thus, mainly because of what might be called a lifestyle defense motive.

Such a spending pattern is of no little significance in gauging the economy's future course. If consumers had been aggressively overindulging in discretionary buying, the consumption cutback would be all the more severe in the current recession. Fortunately, the evidence in this regard argues largely against such a reaction. But in looking beyond the recession, the inclination for consumers to maintain their lifestyles despite inflation does not augur well for any lasting improvement in the saving rate.

Where the money goes

Over the years, the standard breakdown of consumption into durables, nondurables, and services has obscured the emergence of some important changes in the composition of household spending. For example, spending in the nondurables category—reflecting rising energy costs—has undergone a shift away from food and clothing and into petroleum products related to home heating and personal transportation needs. Similarly, in the service category consumption has increased far more rapidly for housing costs* than it has for barber and beauty shops, laundering, and spectator amusements. These and other changing patterns of consumer behavior suggest the need to examine consumption from a somewhat different vantage point.

*Housing services—as opposed to expenditures on new residential construction—are measured in the GNP accounts as the imputed rent derived from investment in home ownership. The value of such shelter services is approximated by trends in rent costs.



Against that background, it is helpful to analyze the spending process in the context of a functional framework. One approach (chart above) is to show consumption by degree of necessity—a classification which, while admittedly somewhat arbitrary, has the advantage of systematizing the priorities implicit in the consumer budgeting process.

Consumer outlays have been grouped into the following three broad categories:

1. "Essential" purchases. These are items which offer a minimum of latitude for household choice—utilities, medical outlays, shelter, legal fees, and the maintenance of personal possessions (e.g., appliances, furnishings, and clothing). As the chart indicates, there has been a steady upward drift of such essential purchases, relative to income, over the past twenty years. Moreover, the increase has been especially rapid since 1974.

2. "Adjustable-essentials." This refers to those elements of the budget whose consumption, while certainly of critical importance, can be modified, but only in *degree*, as a response to changing economic developments. Shifts in types of food (from beef to poultry) and qualitative downgrading of apparel (from designer jeans to ordinary slacks) are examples of such adjustments. This category includes food and beverages (nonalcoholic) consumed at home, apparel, local transportation, and replacement parts for vehicles. The chart shows the distinctly different roles that the two classes of consumer necessities play in the budgeting process. In sharp contrast to the rising income share of essentials, the spending rate for adjustable-essentials has been on a generally steady downtrend over the past twenty years.

3. "Discretionary" purchases. This is the residual after deducting essential and adjustable-essential outlays from total spending. Such purchases include, most importantly, motor vehicles, furniture and appliances, recreation, food consumed away from home, and education. As the chart on page 6 shows, while there is some variability in the discretionary spending rate, movements in this rate usually have been confined to a narrow range. Cyclical influences cannot be denied, but there are variations that do not coincide with the ups and downs of the business cycle. Over the past twenty years the discretionary spending rate has been at or above its average about twice as frequently as it has been below average.

Over all, a functional breakdown of the aggregate spending rate tells a markedly different story about consumer excesses than is commonly appreciated. The most dramatic element of the picture has been the especially sharp upward movement of the spending rate on essentials during the years 1976 through 1979—a period that coincides with the abrupt decline in the personal saving rate. As the table on this page indicates, the spending rate on essentials in 1979 was 3.1 percentage points greater than its average level over the last twenty years, and about half of this excess has occurred since 1975. Thus, spending for basic necessities, such as shelter, medical care, and utilities, has exerted a mounting strain on take-home pay. This pressure has been offset, only in part, by continued efforts to economize on the consumption of adjustable-essentials such as food and clothing. At the same time, discretionary spending relative to income was little different in 1979 from its average over the past two decades, and has been virtually constant for the past four years. This runs counter to the notion of many analysts that consumers have been feverishly overstocking durable goods to beat inflation.

Personal Spending and Saving Rates

(As a percent of disposable personal income)

	Average 1960-79	*1979*	*Deviation from average*
Obligatory spending			
Essentials	28.0	31.1	3.1
Adjustable-essentials	24.6	22.7	−1.9
Total	52.6	53.8	1.2
Discretionary spending	38.9	39.1	0.2
Total spending	91.5	92.9	1.4
Personal saving	6.2	4.5	−1.7

NOTE: Essentials category consists of spending on utilities, medical outlays, shelter, legal fees, and maintenance of household appliances, furnishings, and garments. Adjustable-essentials category consists of outlays on food (excluding alcoholic beverages and purchased meals), clothing and shoes, local transportation (excluding taxis), and expenses on tires and other accessories for autos. Discretionary spending is a residual: consumer outlays less outlays on essentials and adjustable-essentials.

Looking ahead

Recent consumer-spending trends provide some hints of the adjustments that are likely to occur in the household sector during the current recession. First, regarding spending on essentials, the likelihood is slim that there will be any fundamental changes from recent patterns. The spending rate on essentials in the first quarter of this year, for example, stood at 31.4% of after-tax income—0.3% above the 1979 average. Such an increase, or perhaps a bit more, seems a likely prospect for such spending for all of 1980 and for 1981 as well. Second, while the income share earmarked for adjustable-essentials will probably continue to drop in the near term, this adjustment should not be sharp enough to offset the increases in the spending rate for essentials. Indeed, since there is probably a "maintenance floor" to the adjustable-essential spending rate, there is reason to expect that reductions in budgets in this area should gradually diminish in size over time.

Thus, in the next year or so household budgets should continue to be strained by the pressures of obligatory consumption—the sum of the two classes of essential purchases. As a result, a severe curtailment of discretionary spending relative to income would appear to be the principal avenue by which consumers could hope to restore a "normal" saving rate. In fact, if the personal saving rate were to move from its March level of 4% of after-tax income back to the 6% average of the postwar period, then a downward adjustment of more than 2 percentage points would be required for the discretionary spending rate.*

A cyclical swing in the discretionary spending rate of this magnitude would be unprecedented in the economy's postwar experience. In each of the last two recessions, for example, such outlays relative to income fell by 1½ percentage points. Thus, if history is a guide, a "typical" adjustment in discretionary spending is unlikely to promote a surge in personal saving. Indeed, the recent intensity of the lifestyle defense motive suggests that upward movements in the personal saving rate will be limited over the next several years.

*This allows for some decline in the income share of interest payments to business—the principal nonconsumption personal outlay as measured in the GNP accounts. This share did fall fractionally in 1974-75.

The Future of Nuclear Power

A stunning reversal in the fortunes of nuclear power has taken place in this country within a relatively short time span. It was only a little more than half a decade ago that President Nixon, in announcing "Project Independence," confidently forecast that atomic energy would provide 30% to 40% of America's electricity by the end of the 1980s. Atomic plants now account for only about 11% of electric power generation and the pace of future growth is quite uncertain. Indeed, utility officials see major challenges ahead if the nuclear industry is to survive and maintain the nuclear option for this country.

Many factors account for major problems where there used to be glowing promise. The quantum leap in oil prices charged by OPEC has triggered significant conservation efforts in

power use by homes and industry. Slower growth in the use of electric power, now running at roughly 4% per year as against 7% annually in the earlier postwar period, has brought a scaling back in projected needs for both conventional and atomic power plants. All the while, opponents of nuclear power have impeded efforts of the nuclear industry, causing extensive and costly delays in construction programs. Adding to those obstacles have been government regulatory requirements that have stretched out completion time to build a nuclear power plant to more than twelve years, double the time needed in Europe or Japan.

Then, just over a year ago, came the trauma of Three Mile Island. The dangerous overheating of a TMI reactor, though it caused no casualties among workers or the public, has placed the burden of proof on those who say nuclear power is safe.

Taken together, the events of the past few years have sunk the domestic nuclear power industry in the doldrums. Last year there were no new orders by U.S. utilities for reactors and eleven cancellations of earlier orders. Meanwhile, many foreign nations—despite anti-nuclear protests—are pushing ahead on nuclear power. For example, the British government, after completing its own investigation of Three Mile Island, announced a stepped-up nuclear power program for the 1980s. Sweden, buttressed by a favorable public referendum last March, plans to double its nuclear power capacity over the next decade. So, too, does West Germany. France aims to supply 55% of its electric power from atomic plants by 1985 (box on page 13).

It was back in 1957 that the first reactor began producing electricity on a commercial basis. Expansion was swift in the next fifteen years. Since the mid 1970s, however, growth of nuclear power has slowed noticeably. As of May, there were 72 plants licensed to operate, another 88 under construction, and 17 reactors on order. The operating plants generated about 54,000 megawatts (1 megawatt equals 1,000 kilowatts) of electricity. They displaced the equivalent of about 500 million barrels of oil last year.

Even though existing nuclear plants account for only 11% of total electric power, some parts of the nation are heavily dependent on nuclear plants. For example, the area around Chicago, the Southern Atlantic states, and the New England states all rely on atomic plants for more than one third of their electricity.

President Carter is on record against closing the door on nuclear energy as some anti-nuclear groups continue to urge. After Three Mile Island, the President emphasized: "We do not have the luxury of abandoning nuclear power or of imposing a moratorium on its further use."

Power for the people

Behind that judgment is the belief that nuclear power does not present unreasonable risks to public safety. Moreover, there is recognition that a growing nation and expanding industry will need enlarged electric-power capacity. Today's work force of roughly 90 million will climb to 113 million by the year 2000. It will take added power to provide the jobs, food, housing, and goods and services for that bigger work force. An official estimate of future power needs has been compiled by the National Electric Reliability Council (NERC). Even with conservation efforts, NERC estimates that generating capacity in the nation must be increased by 25,000 to 30,000 megawatts per year in the decade 1979-88 to meet rising power demand. That rise translates into a projected growth

rate in electrical use in the ten-year period of 4.7% a year—down, it is true, from the annual growth rate of the past ten years, but still a very sizable increase in needed power-generating capability.

Large-scale options

All power sources will need to be tapped to meet energy needs. Most of them, however, offer little potential for expansion in the near or intermediate term. Take solar power. The technology to use the sun to heat water in homes and to heat (and cool) buildings has existed for years, and solar water heaters are coming into more general use. But use of solar energy to generate large-scale electricity is quite another matter, given existing solar technology. Scientists estimate that it would take a field of solar collectors covering twenty to thirty square miles to produce the same amount of electricity as a typical nuclear plant. Scientists see the possibility of solar space stations that would collect and transmit the sun's energy to earth via a microwave system. That, of course, is far in the future. Solar energy, thus, is not counted on as a major source of power before the end of the century.

Hydroelectric power accounts for about 13% of total electric power production. All the best dam sites, however, are already taken. And new dams are vigorously opposed by environmentalists. The possibilities for power expansion are very limited, too, in other fields. In fact, none of the other power sources—geysers, windmills, photovoltaics, electricity from waste products—is given any chance of meeting the nation's growing power needs, at least not in this century.

That leaves only two nonoil power sources that offer any real capability of supplying the nation's needs for electricity in the next 25 years: coal and the atom. Both have good points; both have drawbacks. Yet scientists agree that expansion of coal and atomic power offers the only alternative to overdependence on unstable sources of high-priced foreign oil.

Coal is abundantly available in this country, with reserves sufficient to last several hundred years. Gasification of coal for delivery through existing gas pipeline systems may prove to be an added source of energy for space and water heating. An internationally sponsored "World Coal Study," issued in May after eighteen months of work, found a bright potential for coal in the world power picture. To help meet world energy requirements, the study urged a tripling in coal use and stressed that such a rise could be accomplished without sacrificing health, safety, and environmental protection. The reason: oil is now so expensive that it is economic to clean up coal.

Nuclear energy, too, has many positive features. Supplies of uranium, the nuclear fuel, are sufficient to last well into the 21st century even without development of the "breeder" reactor, which produces more fissionable material than it burns. The nuclear industry's safety record (not a single radiation death in nearly three decades) ranks No. 1 in all of industry. And nuclear power is "clean."

Additionally, electricity from the atom generally has been more economic than that produced from the other major fuel sources. For example, an Atomic Industrial Forum (AIF) survey in 1978, covering 43 utilities with nuclear and other facilities, found the following cost per kilowatt-hour of electricity produced: 1.5 cents for nuclear; 2.3 cents for coal; and 3.5 cents for oil. Those are costs of producing power at the "bus bar," the point at which electricity leaves the generating station. The costs

include equipment, interest, fuel, operation and maintenance, insurance, and taxes.

The 1.5 cents per kilowatt-hour for nuclear power in 1978 compared with 1.2 cents in 1975, according to the AIF. Coal generating costs climbed from 1.8 cents in 1975 to 2.3 cents in 1978.

Coal plants generally take less time to plan, license, and build (six to nine years) than do nuclear plants (ten to twelve years). Nuclear plants have somewhat higher capital costs than coal plants, but the former have much lower fuel costs. In 1978, for example, fuel costs for nuclear power plants accounted for 22% of total production costs. For coal, fuel averaged out at 55% of total costs.

Projections of future costs of generating electricity—either by coal or atom power—are speculative and, indeed, controversial. The reasons are easy to understand. Forecasts on power costs require a whole series of assumptions—on interest rates, inflation, fuel costs, the regulatory environment, and so on.

While estimates of nuclear power costs in the future often show quite a variation (because of different assumptions about cost factors), nuclear analysts believe that nuclear power offers cost advantages over coal—particularly in areas where expensive pollution-control equipment must be installed. One estimate of future power costs—contained in a Ford Foundation study released in May 1979—placed the cost per kilowatt-hour for nuclear power in 1990, expressed in 1978 dollars, at 2.4 cents. For coal: 2.8 cents. Both figures are average costs for the U.S.

Three problem areas

All this is not to say, obviously, that nuclear power is problem-free. It clearly does have difficulties. Here are three major concerns:

Safety. The overriding public concern is the potential for catastrophe—a nuclear explosion or a "melt down" of the reactor core, the so-called China Syndrome.*

The former—an explosion such as in an atomic bomb—is not possible. The most important reason is that the reactor's fuel is a uranium dioxide ceramic material containing only 3% to 5% fissionable material. An atomic bomb requires a solid mass of nearly pure U-235 or plutonium.

The latter—a melt down—is possible, although it is significant that in well over 200 reactor years of commercial operation there have been no reactor-core melt downs. To melt the fuel requires a failure in the cooling system or the occurrence of a heat imbalance that would allow the fuel to heat up to its melting point, about 5,000 degrees Fahrenheit. In that event, the molten core might breach the outer containment building, releasing large amounts of radioactivity into the atmosphere.

The safety design of reactors includes a series of systems to prevent the overheating of fuel and to control potential release of radioactivity from the fuel. Such systems went into operation at Three Mile Island. Water was added to the system to cool the reactor. The TMI accident did result in a loss of cooling water from the reactor and the fuel was not covered with water during part of the period. However, while the extent of the damage to the fuel core is still uncertain, a melt down in the classic sense did not occur. And, in spite of serious damage to the plant, a Presidential Commission concluded that most of the radioactivity was contained and

*Despite the risks, the public seems opposed to abandoning nuclear power. A recent Harris poll disclosed that, while nearly three quarters of the public believed there was no guarantee against a castastrophic nuclear accident, the majority nonetheless felt that nuclear power was too important to abandon at this time.

that the actual release will have a negligible effect on the physical health of individuals in the area.

What are the chances that one day a melt down actually could take place? The most comprehensive assessment of probabilities and consequences of accidents at nuclear power stations was conducted by 60 scientists and engineers in 1975. The three-year study was headed by Professor Norman Rasmussen of the Department of Nuclear Engineering at Massachusetts Institute of Technology.*

The consequences of a core melt would depend mainly on three factors: the amount of radioactivity released; the way it is dispersed by prevailing weather conditions; and the number of people exposed to the radiation. The Rasmussen study calculated the health effects and the probability of occurrence for 140,000 possible combinations of radioactive release magnitude, weather type, and population exposed. The probability of a given release was determined from examination of the probability of various reactor system failures. The probability of various weather conditions was obtained from weather data collected at many reactor sites. The probability of various numbers of people being exposed was obtained from U.S. census data for current and planned U.S. reactor sites. The required thousands of computations were carried out in computer banks.

The results are shown in the accompanying table. It compares the likelihood of a nuclear accident to nonnuclear accidents that could cause the same consequences. For example, the average probability of 100 or more fatalities from

Figuring the Odds on a Catastrophe

	Probability of 100 or more fatalities	*Probability of 1,000 or more fatalities*
Airplane crash	1 in 2 years	1 in 2,000 years
Fire	1 in 7 years	1 in 200 years
Explosion	1 in 16 years	1 in 120 years
Toxic gas	1 in 100 years	1 in 1,000 years
Tornado	1 in 5 years	very small
Hurricane	1 in 5 years	1 in 25 years
Earthquake	1 in 20 years	1 in 50 years
Meteorite impact	1 in 100,000 years	1 in 1,000,000 years
Reactors (100 plants)	1 in 100,000 years	1 in 1,000,000 years

SOURCE: *Reactor Safety Study*, U.S. Nuclear Regulatory Commission, October 1975.

100 nuclear plants is 1 in 100,000 years—the same as the chance of a meteorite falling from the heavens.

A related concern: If a major accident should occur, what would surrounding populations do to avoid the danger? As yet there is a general absence of effective evacuation plans. In some areas, rapid mass evacuations may be physically impossible. Nonetheless, efforts are being made to improve such planning among utilities and local governments.

Waste disposal. Spent nuclear fuel contains many deadly elements—e.g., strontium 90, cesium 137, and plutonium. Such wastes remain lethal for very long periods. Clearly, disposing of them poses problems for government and industry, but the task is far from unmanageable.

Contaminated wastes from military programs (weapons, ships, research) account for more than 90% of total nuclear wastes. Over the

*A review of the Rasmussen study commissioned by the U.S. Nuclear Regulatory Commission found some deficiencies. Nevertheless, the Review Group strongly supported the objective of quantitative safety analysis, commended the Rasmussen group for a pioneering effort, and urged the NRC to make more extensive use of quantitative analysis in the regulatory process.

THE PUSH FOR ATOMIC POWER ABROAD

NATIONS abroad are pushing ahead with ambitious nuclear power programs, spurred by precarious oil supplies and rising oil prices.

There are nuclear units generating electricity in seventeen noncommunist nations outside the U.S. (accompanying table). Their combined generating capacity as of the second quarter of 1979 was 56,210 megawatts—about equal to U.S. nuclear generating capacity.

France has Europe's most ambitious program—with a nuclear commitment of $8 billion a year. Its 1,200-megawatt "breeder" reactor (Super Phoenix), when completed in 1982, is seen giving France a ten-year lead over the U.S. in the commercial application of fast-breeder technology. The U.S. "breeder" effort is contained in the Clinch River project in Tennessee.

Germany, Spain, and Italy recently have reaffirmed their goals of major nuclear expansion. West Germany has ten nuclear plants in operation and fifteen more in the planning stage. Spain, with three reactors, is planning to add fourteen more. Italy expects to more than double the number of its reactors in the decade ahead; four are now in operation. Belgium, Switzerland, and Sweden plan to produce 40% to 50% of their electricity with nuclear reactors by 1990. Japan, with twenty nuclear reactors, has a generating capacity of nearly 13,000 megawatts—second only to the U.S. among noncommunist nations.

Russia and other communist countries in Eastern Europe are forging ahead with nuclear power expansion. Comecon, the Soviet bloc's economic alliance, has a target of producing 25% of its electric power with nuclear reactors by 1990—compared with about 5% currently.

Nuclear Reactors and Generating Capacity

(Noncommunist nations; second quarter 1979)

	Reactors	*Capacity (megawatts)*
Asia		
Japan	20	12,840
India	3	620
Pakistan	1	140
South Korea	1	590
Taiwan	2	1,270
Europe		
Belgium	3	1,740
England	33	9,010
Finland	2	1,150
France	15	7,800
West Germany	10	7,050
Italy	4	1,490
Netherlands	2	520
Spain	3	1,120
Sweden	6	3,850
Switzerland	3	1,060
North America		
Canada	9	5,590
United States	71	54,180
South America		
Argentina	1	370
Total	189	110,390

past 30 years the government has generated enough wastes to cover four highway lanes ten inches deep for a hundred miles, according to the General Accounting Office. Those wastes are being stored in three government facilities. In addition, some 4,000 metric tons of commercial nuclear plant spent fuel are now being safeguarded in cooling pools at reactor sites.

The nuclear industry feels that waste disposal is a political, not a technical problem.

Says the Electric Power Research Institute: "The technology for disposing safely of nuclear waste material is already available—and by several processes." The problem is said to be the lack of decision by government on which disposal system to accept.

A government review group is on record with a relatively optimistic view about the waste-disposal challenge. President Carter established an Interagency Review Group on Nuclear Waste Management in March of 1978. The fourteen agencies in the review group reported a year later that: "Over-all scientific and technological knowledge is adequate to proceed with regions selection and site characterization . . ."

Energy Department officials think that the disposal system most likely to be settled on involves mixing the nuclear wastes into molten glass. The solid "glass" then can be sealed in welded stainless steel canisters. Such containers could be buried in deep salt beds. Salt beds, which underlie about a half million square miles of the U.S., are among the most stable geological foundations known.

The Edison Electric Institute calculates that all the wastes from the country's commercial nuclear energy program through the year 2000 would only make a stack eight feet deep between the goal lines of a football field.

Proliferation. Problem No. 3 for the nuclear industry is the potential misuse of nuclear fuel. Plutonium is produced when uranium is irradiated in a reactor. That plutonium can be used as reactor fuel—or to make a nuclear bomb.

The concern is that expansion of nuclear power plants could abet the proliferation of nuclear weapons among nations. An added fear is that terrorists might steal plutonium and fashion a crude bomb.

The spread of nuclear weapons clearly should be prevented. To that end, the U.S. military has safeguarded the use and shipment of plutonium for 30 years. Commercial nuclear plants have tight security systems to protect plants and their fuel.*

Sale of nuclear power plant components abroad—where control over their use cannot be maintained—raises special problems. The U.S. and other nuclear nations have placed restrictions on their nuclear sales abroad. It should be noted, however, that other nations, if determined to produce nuclear weapons, can accomplish that objective (indeed, some already have done so) without having a nuclear power plant in operation.

Financial fallout

Quite aside from such technical problems for the nuclear power industry, financial worries are sizable and on the increase. In an industry that is capital-intensive, costs have been climbing fast. And in the wake of Three Mile Island, refitting the nation's operating nuclear plants with additional safety features will cost millions of dollars. Add in the cost of redesigning plants under construction and the cost of added delay in putting these plants into service and the total may well reach in the billions. Fast-rising costs, regulatory uncertainties, and lower projections of future power needs recently caused the abandonment by a consortium of Northern Ohio utilities of construction of four big nuclear plants. For similar reasons, Detroit Edison re-

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*Theft of reactor fuel would be difficult. Scientists at the Edison Electric Institute calculate that a crude bomb using 25 pounds of plutonium would require the theft of about 1,500 pounds of radioactive fuel, removed from 12-foot-long reactor fuel elements transported in a shipping container weighing up to 100 tons.

Dr. Edward Teller, nuclear scientist, on nuclear terrorists: "Any terrorist who puts his mind to it can come up with ways to terrorize a population that are less dangerous to himself than handling plutonium. The answer is not to get rid of the reactors —let's get rid of the terrorists."

cently cancelled plans to build two nuclear plants, explaining that continuing the plants would not be a "prudent allocation of the company's resources."

Soaring costs come at a time of serious erosion in the financial conditions of most utilities. Internal cash flow has decreased, forcing companies to raise a larger percentage of their construction funds externally. At the same time, interest costs of debt have only recently come down from historic highs and stock prices are still near their lows. Interest-coverage requirements mandate that fewer bonds can be sold when rates are high, and low stock prices mean more stock has to be sold to raise a given amount of money—diluting values for the present holders.

The question raised more and more often these days by industry analysts and utility managements: Has a commitment to nuclear power become too expensive and the payoff too uncertain for the investor to risk his money and for management to risk its company?

Surely, utilities will be exceedingly wary about pushing ahead with any reactors beyond those already under construction unless they receive a clear mandate from government to do so. Such a mandate would need to embrace changes in licensing and review procedures to shorten the present drawn-out construction time for nuclear plants.

Cloudy future

Inflation, a mounting regulatory burden, the uncertain financial health of some utilities, opposition to nuclear expansion from environmental and consumer groups, erosion of public support—all those combine to make nuclear power's future cloudy. And yet the need for nuclear power in the nation's energy complex is clearly evident for decades into the future.

About 17% of the nation's electric power comes from oil-burning generators. Quite aside from reducing U.S. dependence on unstable and high-priced foreign oil, that liquid fuel is a diminishing resource. It makes good sense to use atom power to generate electricity and, thus, to free petroleum for use in gasoline, heating oil, medicine, plastics, and fertilizer.

Total energy demand in the U.S. will increase between 40% and 80% by the end of the century, according to the Electric Power Research Institute. The uncertainty in the projection is due to difficulties in estimating economic growth, labor productivity, and the success of conservation efforts. The estimate of electric power demand shows a similarly wide range—from two to three and one half times present consumption. Even the low end of the range, however, suggests an enormous need for added power facilities. Clearly, failure to move ahead with nuclear energy risks power shortages in this country in the 1990s and beyond, with all that would imply in terms of higher inflation, slower economic growth, continued energy dependence, and national insecurity.

What's needed is a stable political and institutional framework within which nuclear power can operate today—and plan for tomorrow. A broad-based consensus as to nuclear energy's safety and its essential role is vital to such a framework. For it is the public—much more than the technical experts—that will decide the future of nuclear power. Such a consensus may develop when there is more general recognition that all energy sources entail risks. Conservation, solar power, and other noncoal-nonnuclear energy sources can not be counted on to close the gap between present electrical generating capacity and the real needs of a growing economy.

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The Economy at Midyear: Still in Retreat

AS the economy moves into the second half, it is clear that the decline in economic activity has continued—as sharp drops in orders for both durable and nondurable goods had foreshadowed. But, here and there, signs are beginning to emerge that the descent is no longer quite so steep. Late May and early June apparently have brought a somewhat less dour tone in consumer markets. And there has been a stabilizing tendency evident in unemployment insurance claims.

In retrospect, the second quarter was one of extraordinary decline in "real" GNP—a near-record 8% to 9% at an annual rate according to the Commerce Department's "flash report." Even so, output schedules were not adjusted rapidly enough to keep pace with declines in sales. Thus an involuntary run-up in inventories remains to be worked off in coming months. As a consequence, employment prospects are still quite poor—something apparently generally appreciated by the public, judging by widespread declines in "quit" rates, an indicator of workers' anxiousness to hold on to their jobs.

Output of consumer goods fell 3.7% between January and May, a period when real retail sales declined a much sharper 10.3%. For capital goods, likewise, the drop in the volume of shipments has been larger than that in output, although the disparity has been less marked.

Durable-goods producers especially, whose stocks had risen to unusually high levels even before this spring's slump in sales, will have to redouble efforts to hold down inventories in coming months.* The incentive to do so is

*See "Business Inventories: A Problem After All?" *The Morgan Guaranty Survey*, April 1980.

strong given a background of accelerating weakness in orders: the drop of 18% in durable-goods orders between January and May, in fact, was in line with the decline between August and December of 1974.

It is, of course, fortunate that the run-up in inventories, over all, comes after a year of modest growth in stocks, in contrast to the pattern during other prerecession periods. Encouraging, also, is the unlikelihood that consumer spending will continue to decline at the recent unprecedented rate. That slump in consumer buying was in large part the result of confusion created by the March 14 controls on revolving consumer credit. One consequence: consumer installment debt outstanding fell in April (the latest month for which data are available) by a record $2 billion. The only parallel in post-World War II history was November 1950—just after the Federal Reserve, in order to halt the heavy consumer buying touched off by fears of scarcities during the Korean War, imposed minimum down-payment and maximum maturity requirements covering credit for the purchase of autos and other consumer durables.

Changing sentiment

As time has elapsed, however, the psychological effects on consumers of the 1980 experiment with peacetime credit controls seem to be abating. Nationwide, credit sales as a percent of total retail sales—after declining precipitously early this spring—have tended to move back to more normal levels. Even in May, it appears, credit-related consumer buying began to pick up—judging by the modest increase in sales at general merchandise, apparel, furniture and appliance stores. Auto markets continue to be depressed. But sales of domestic makes have made some headway from their lows, running at an annual rate of 5.5 million units in the first two ten-day selling periods of June, up from the 5.3 million rate of May.

Consumer Price Index

(Percent change at an annual rate)

			1980	
	1978	*1979*	*Jan.-March*	*April-May*
Total	9.1	13.3	18.1	11.2
Excluding home purchase and finance	7.8	11.0	16.3	7.0
Energy	8.1	37.5	64.8	10.5
Other	7.8	8.1	10.0	6.7
Home purchase and finance	15.6	23.8	26.6	29.6

In short, the evidence doesn't point to any major revival of retail demand. But it does suggest that the worst declines are over. Total removal of consumer credit controls, which is now widely expected, presumably would contribute to improved sentiment. Moreover, personal income is being bolstered this month by a relatively large addition ($16 billion at an annual rate) to Social Security benefits. Lastly, consumer spending in months to come could benefit from anticipation of a tax cut early in 1981, the odds on which have increased in recent weeks.

Another positive factor is the renewed uptrend in the purchasing power of wages, caused primarily by deceleration in the rate of increase in oil-product prices (table on this page). Excluding home purchase and finance costs, the advance in the consumer price index (CPI)—7% at an average annual rate in April and May—has already fallen below the prevailing trend of wage increases, which over the past year have averaged about 9%. The broad CPI is likely to continue to show a double-digit rate of increase

in June—as mortgage interest rates are picked up in the index with a lag. Beginning in July, however, the mortgage-rate component of the CPI should flatten out, and then decline, as the index reflects the recent drop in mortgage rates. As that occurs, increases in consumer prices should fall well below double-digit rates. Indeed, it is entirely possible that the climb in the CPI will be limited to a rate below 7% for several months later this year.

Financial-market trends

Domestic money and capital markets, meanwhile, reflected the weakening trend in economic activity and expectations that inflation will continue to decelerate. However, only moderate declines in money and capital-market rates were recorded during June in comparison with those of April and May—when yields on many short-term securities were cut in half. And, as the month came to a close, interest rates had retraced much of their early June declines.

Monetary policy seems to be supporting a holding pattern in short-term rates, judging by the relatively narrow range in which the Federal funds rate has fluctuated in recent weeks (9% to 10% on the basis of weekly averages). The fact that the discount rate, despite its decline of one percentage point to 11% on June 13, has remained significantly above the prevailing funds rate also suggests that the authorities have not been inclined to encourage further large drops in interest rates.

Presumably, that reflects the Federal Reserve's judgment that the monetary aggregates, which had fallen far below target ranges in April and May, would move back into those ranges this summer. Indeed, some signs of that are beginning to emerge. To be sure, M_{1b} (currency and checking-type deposits), for example, has remained below a level consistent with targeted growth of 4% to 6½% during 1980. But its rapid expansion very recently (13% at an annual rate in the four weeks ended June 18 compared with the previous four weeks) has brought it significantly closer to the targeted range. For the moment, the Federal Reserve seems to be satisfied that the current supply of bank reserves will be adequate to bring about a sustained resumption of satisfactory growth in the aggregates. (In this connection, it is noteworthy that, with the discount rate at a relatively high level, member-bank borrowings have declined substantially—offsetting the large addition to reserves provided in recent months through open-market operations.)

One by-product of the comparatively small declines in U.S. money-market rates has been an end to the steep fall-off in the value of the dollar: in recent weeks, it has tended to stabilize against most key currencies, ending the sharp declines that occurred in April and May when U.S. interest rates plunged.

The drop in interest rates that has already occurred holds out the promise of an eventual upturn in economic activity, tentative signs of which are now beginning to surface. And thus the Federal Reserve's recent "wait and see" posture seems to be a reasonable one. The alternative course of aggressive further easing, at a minimum, would create renewed problems for the dollar on exchange markets. It would risk as well aggravating inflation expectations that for the first time in a long while have begun to subside.

U.S. Trade: An Improving Performance

AMERICA's international trade performance stands out as one of the few bright spots in an otherwise dreary economic landscape. After recording a deficit at an annual rate of $10 billion in the first quarter, the U.S. current-account balance—which is the difference between receipts and expenditures for goods and services and unilateral transfers—almost certainly swung toward balance during the second quarter of this year.* Moreover, prospects are good that the current-account balance will move into surplus during the second half—and the surplus could extend well into next year.

If that expectation is realized, strength in the trade sector would help to offset faltering domestic demand. Too, the dollar, under pressure earlier this year as U.S. interest rates slumped, would get some support.

The expected strength in the U.S. current-account position is all the more remarkable in light of the near tripling of world oil prices during the past eighteen months. Since 1978, prior to the latest round of oil-price increases, the U.S. oil-import bill has more than doubled —from $42 billion to about $85 billion estimated for this year. Despite that steep rise, however, the U.S. current-account balance has steadily improved: from a $14 billion deficit in 1978 to an $800 million deficit last year, and to the prospect for a surplus later this year. No other major industrial country has performed as impressively, and, in fact, most nonoil exporting countries have experienced a sharp deterioration in their current-account balances.

*The current-account balance includes merchandise trade, the balance on services transactions—including travel, transportation, insurance, and earnings from foreign investments—and unilateral transfers, which include U.S. government nonmilitary grants as well as private remittances overseas. The only exclusion: capital flows.

The marked improvement is due chiefly to three developments. Some of these—such as last year's sluggish economic growth and, now, the recession, which have dampened demand for foreign goods—are merely temporary. Others—such as the rising tide of profits from the foreign operations of U.S. businesses—are a more permanent feature. The three key factors, in brief:

1. Payoff from investments. U.S. companies at the end of 1978 had $168 billion in direct investments abroad while foreign companies had invested only $41 billion in the U.S. During the past decade, earnings from those investments abroad have grown rapidly. The balance on such earnings rose particularly fast during 1979, increasing by nearly 50% to $32 billion (table on page 5). Sharply higher profits by overseas subsidiaries of oil companies contributed importantly to the record rise last year—an uptrend that has continued this year. Net income on direct investments is likely to increase by at least $15 billion between 1978 and 1980. Such a rise would offset about one third of the increase in this country's oil-import bill in that period.

2. A weakening economy. The slowdown in "real" GNP growth in 1979 (2.3% as against 1978's 4.4%) contributed to reduced demand for foreign goods. Nonoil merchandise imports last year rose only 13%, compared with a 25% increase in 1978. At the same time, the economies of other industrial countries continued to expand—providing a strong market for U.S. exports. This combination produced a $28 billion surplus on nonoil merchandise trade last year, up $21 billion from 1978.

That improvement was broadly based, with all of the major nonoil categories contributing.

U.S. Current-Account Balance

(Billions of dollars)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Total	2.3	−1.4	−5.8	7.1	2.1	18.3	4.4	−14.1	−14.3	−0.8
Merchandise	2.6	−2.3	−6.4	0.9	−5.3	9.0	−9.3	−30.9	−33.8	−29.5
Fuels	−1.5	−2.3	−3.4	−7.0	−23.9	−23.8	−32.3	−42.9	−41.1	−57.4
Excluding fuels	4.0	0	−3.0	7.9	18.6	32.8	23.0	12.0	7.3	27.9
Foods and feeds	−0.3	−0.3	0.2	6.1	8.1	9.6	8.3	5.7	9.8	12.4
Industrial supplies	−0.1	−2.5	−3.6	−1.3	−0.5	2.5	0.2	−3.3	−4.5	5.2
Capital goods (ex. autos)	10.5	10.9	10.8	13.5	20.8	26.3	26.8	25.8	27.2	33.6
Consumer goods (ex. autos)	−4.6	−5.5	−7.6	−8.1	−8.0	−6.7	−9.1	−12.9	−18.5	−17.9
Autos	−1.7	−2.7	−3.3	−3.4	−3.4	−1.2	−4.1	−5.3	−8.6	−8.1
Other	−0.4	0.1	0.5	1.1	1.6	2.3	0.9	2.0	1.9	2.7
Services	3.0	4.6	4.5	10.1	14.6	13.9	18.7	21.5	24.6	34.4
Military	−3.4	−2.9	−3.4	−2.1	−1.7	−0.7	0.6	1.7	0.9	−1.3
Travel	−1.6	−1.8	−2.2	−2.1	−1.9	−1.7	−1.1	−1.3	−1.3	−1.1
Earnings on direct investments	7.3	8.0	9.7	14.9	17.8	14.4	15.9	17.2	21.0	31.8
Other income flows	−1.1	−0.7	−1.5	−2.8	−2.3	−1.6	0.1	0.7	−0.1	0.7
Other	1.2	1.9	1.9	2.2	2.7	3.5	3.2	3.1	4.1	4.3
Transfers	−3.3	−3.7	−3.9	−3.9	−7.2	−4.6	−5.0	−4.6	−5.1	−5.7

The two areas in which the U.S. has traditionally recorded trade surpluses—agriculture and capital goods—both registered sharp increases in their surplus positions, and the balance on nonfuel industrial supplies swung sharply from deficit into surplus on the strength of excellent export demand for U.S.-produced chemicals and textile materials. The traditional deficit in consumer goods declined slightly as imports of both durable and nondurable consumer goods slowed sharply. Even the deficit on auto trade declined slightly. This was due chiefly to the fact that Canadian imports of American cars were maintained while imports of autos from Canada fell sharply due to the slump in the U.S. auto market. The relatively stronger auto market in Canada helped to offset increased imports from Japan.

April and May trade figures provide evidence that the onset of recession in the U.S. is having a further significant depressing effect on demand for imported goods. The annual rate of nonoil merchandise imports in April and May was 4% below the level of the first quarter and only 11% above the level during April and May of 1979. At the same time, export demand has remained strong, with the level of exports during April and May running 29% above the rate of a year ago. Economic strength abroad has been a contributing factor to the continued good export performance. In fact, the rate of increase of both real GNP and re-

tail sales in industrial countries other than the U.S. accelerated during the first quarter. In recent months there have been growing signs of economic slowing, and the expectation now is for little or no growth for the remainder of this year, on average, in other industrial countries. However, no sharp drop in output similar to what is now occurring in the U.S. is indicated or anticipated. As a consequence, the continued relative weakness of U.S. markets appears likely to contribute to a further substantial rise in the U.S. surplus on nonoil merchandise trade this year.

3. Oil-use restraint. The combination of a sluggish economy and fast-rising oil prices has brought a sharp reduction in demand for foreign oil. Imports of crude oil and petroleum products (excluding imports through the Virgin Islands) in recent months have dropped to around 6.5 million barrels per day (mmb/d)—as against 8.2 mmb/d in 1979—and now appear likely to average around 6.9 mmb/d for the year. At current oil prices, a 1.3 mmb/d drop in oil imports—a decline of 16%—reduces the annual oil-import bill for the U.S. by approximately $16 billion.

Relatively low U.S. dependence on imported oil to satisfy its energy needs (20% of total U.S. energy requirements are met by imported oil against 55% for West Germany and 70% for Japan) means that small percentage changes in energy consumption or domestic energy production can result in quite large changes in import requirements. Energy consumption held about flat in 1979 and appears likely to fall several percentage points this year as a result of both higher oil prices and the recession. Meanwhile, domestic energy production rose by more than 2% last year and has continued to rise during the first half of this year. These divergent trends, even though modest in terms of percentage changes, have produced a sharp drop in oil import requirements.

If a current-account surplus is realized in the second half, it will yield twin benefits. The first is an offset for some of the current weakness in domestic demand. In the first quarter of this year real GNP would have fallen slightly rather than increasing at a 1.2% annual rate if it had not been for the significant improvement in the real net export balance. And it is likely that improvement in the real trade balance will continue to be a plus for the U.S. economy in the second and third quarters.

A second beneficial impact of the good U.S. trade performance is likely to be felt by the dollar. A current-account surplus, of course, directly adds to the demand for dollars on foreign exchange markets and thus serves to support the U.S. exchange rate. This lift for the dollar will be an important offset to the negative impact of low U.S. interest rates relative to interest rates abroad and to the relatively negative outlook for inflation in the U.S. In 1975, a large current-account surplus played a key role in the strength of the dollar.

How long will it last?

Since cyclical weakness in the U.S. economy is a significant contributor to this country's sharply improved current-account performance, what happens when the recovery sets in late this year or early next?

The experience following the 1974-75 recession is a dramatic example of how a cyclical strengthening in the U.S. economy can lead to a sharp deterioration in the current-account balance. When a strong recovery got under way in 1976 and 1977, the current-account balance, which had shown an $18 billion surplus in 1975, very quickly deteriorated, reach-

ing a deficit of $14 billion by 1977. Contributing significantly to that deterioration was a 45% increase in oil imports as energy demand rose rapidly while energy production was stagnant.

The general expectation this time around, however, is that the recovery from the current recession will be much slower than it was after the 1974-75 downturn. The current-account balance, thus, might be expected to deteriorate less rapidly when economic expansion resumes.

Oil imports, however, may again be critical to the trade performance following the recession. With oil prices as high as they are today, a 1% increase in energy consumption that is met by increased oil imports will add $5 billion to the annual oil bill. As a consequence, the success achieved in holding the line on oil imports may well be a key determinant of how long the United States continues its good trade performance.

The Upsurge in TAA

FROM modest beginnings, the Labor Department's program of trade-adjustment assistance (TAA)—which provides unemployment benefits to workers laid off because of increased imports—recently has burst into prominence. With mounting unemployment in the auto industry swelling the ranks of workers certified as eligible for TAA, money for benefit payments ran out the first week in June. Because TAA is an open-ended "entitlement" program, Congress last month had little choice other than to appropriate additional funds.

The ballooning of the program—which cost $258 million in fiscal 1979—to an estimated $1.5 billion this year inevitably has stirred criticism that TAA has become too expensive. And it has dampened prospects that the Senate will approve a bill, passed by the House last year, that would extend TAA to workers indirectly affected by imports (such as producers of parts or services for "trade-impacted" products).

The upsurge in claims for assistance by auto workers has focused national attention on a program that heretofore has affected a number of industries, but only in a relatively minor way. For example, of the 441,000 workers receiving TAA payments as of the end of April, 310,000 of the claims were by auto workers. The remaining 131,000 were spread through a variety of industries. In recent years, TAA payments have gone out to workers in the apparel, footwear, electronics, steel, fabricated metals, copper, and coal industries.

Meanwhile, against a background of surging sales of Japanese cars in the U.S. this year, the United Auto Workers union filed an escape-clause petition with the government on June 12 seeking extensive relief from imports (box on page 8). The petition asks for an increase in the tariff on cars to 20% from 2.9% and a cutback in imports from all countries except Canada (with which the U.S. has an automotive free-trade agreement) to the level in either 1975 or 1976. The latter request implies a reduction of roughly 25% to 40% from the 1979 import level. The petition seeks such relief for five years, to be phased down after three years. The UAW action will prompt an investigation by the U.S. International Trade Commission

THE UAW PETITION

IN filing the UAW's escape-clause petition on June 12, union president Douglas A. Fraser said, "We believe there is strong evidence that substantial injury is occurring to the auto industry because of imports surging last month to 28.4% of new car sales compared to 17.6% in 1978." The main target of the petition is Japanese producers. According to UAW, "Nissan, Toyota and others have moved in to exploit the U.S. market in such a way that permanent damage will be done if the government fails to act to give the auto industry time to redesign and retool." The union said it was taking the action because the "jobs of thousands of our members and workers in other related industries will be lost permanently if imports are not restrained." The auto companies have not joined in the petition and are divided on the question of import protection. Ford has been arguing vigorously for import restraint, though it has not endorsed the specific relief measures sought by the UAW. General Motors has opposed formal protective measures. But recently the G.M. chairman called for the U.S. government to persuade the Japanese government to act now—and voluntarily—to adopt more prudent trading practices with the U.S., arguing that such prudence would help head off the wave of protectionist sentiment now building in this country. (Invoking the escape clause implies no allegation of unfair trading. In cases where dumping or subsidization is charged, other remedies are available: box on page 9.)

The UAW petition was filed with the U.S. International Trade Commission (ITC), a quasi-judicial body which must determine whether imports are a "substantial cause" of serious injury and, if so, recommend a specific form of relief to the President within six months of the filing date. (A substantial cause is one that is more important than any other single cause.) The President then has two months to decide whether to accept, reject, or modify the recommendation. If the President denies the recommended relief, the UAW has the right of appeal to Congress—which can adopt a concurrent resolution requiring that the ITC's recommendations be put into effect.

(successor to the Tariff Commission), during which the union will have to explain the basis for the specific remedies it is seeking. Until recently the Administration had indicated that it opposed import protection, but now it apparently is reassessing that position.

Thus both the TAA and escape-clause approaches to alleviating injury from imports are receiving major tests this year owing to the troubles of the auto industry. There is no little irony in the situation. A main aim of the 1962 legislation authorizing TAA was to provide an alternative to existing escape-clause relief—which can take the form of increased tariffs or quantitative restrictions on imports. Another intent was to deflect protectionist pressures from organized labor.

Growing dissatisfaction in the 1950s with the escape-clause approach led to the inclusion in the Trade Expansion Act of 1962 of authority for trade-adjustment assistance. This afforded various kinds of help for both workers and companies adversely affected by foreign competition. Workers deemed eligible for TAA could get supplemental unemployment benefits, retraining and placement services, and relocation allowances; eligible firms could receive loans or loan guarantees, technical assistance, and tax relief. Inclusion of these provisions was instrumental in gaining labor support for the 1962

RELIEF FROM UNFAIR TRADING

THE oldest form of assistance to industries injured by import competition, dating from 1897, provides for the imposition of countervailing, or additional, duties on imports that benefit from foreign-government subsidies. The next oldest, dating from 1921, is U.S. anti-dumping law, which provides for additional duties when a foreign good sells in the U.S. at less than "fair value" (the price of the good in the exporting country) or below the cost of production.

Historically, these forms of relief had not been of great value to U.S. firms, partly because procedures in invoking the anti-dumping and countervailing duty statutes had tended to be long and involved. During the past ten years, however, there has been increased action under these statutes, reflecting more pressure to process cases and greater zeal in Congress to enforce the laws. As a result, U.S. industries have received significant relief in a number of cases. Major examples include dumping penalties on certain steel imports from Japan and Europe, and countervailing duty relief on cheese imports from the European Community.

Anti-dumping law was streamlined somewhat in 1979, and under the revised statute United States Steel Corporation—in an action that has attracted much attention—filed anti-dumping complaints against sixteen firms from seven European nations on March 21 of this year. That prompted immediate suspension by the Administration of the "trigger-price system," which had been put into effect in 1978 as a compromise measure aimed at heading off anti-dumping actions by the domestic steel industry. The Administration—anxious to avoid fueling inflation directly by a major restriction of imports—suggested the trigger-price mechanism, which set a floor price on steel imports. This was based on production costs for Japanese steel producers, which were assumed to be the most efficient. Imports entering the U.S. below the trigger price risked automatic initiation of an anti-dumping investigation. A key condition attached to the arrangement by the Carter Administration was that the steel industry refrain from starting an anti-dumping action as long as the system was in effect.

The system did seem to have some effect in retarding imports. U.S. producers, however, viewed relief as inadequate and quickly began to voice a number of specific complaints against the system. Most importantly, American companies argued that, since European steel costs were substantially higher than Japanese steel costs, European producers could sell steel at or above the trigger price but below "fair value" or cost without automatically triggering a dumping investigation.

U.S. Steel has won the initial skirmish in its dumping case by convincing the U.S. International Trade Commission that there is at least a "reasonable indication of material injury," and it is now the responsibility of the Commerce Department to evaluate claims and counterclaims and to render a preliminary finding by October. The common presumption is that a compromise will be reached well before the deadline for the finding. It would not be surprising if that compromise took the form of a modified trigger-price mechanism, with new trigger prices for European steel producers based on European costs.

act, which provided U.S. negotiating authority for the Kennedy Round of tariff cuts. As an alternative to escape-clause action, TAA was looked upon as a means of minimizing friction with other countries and minimizing price-boosting consequences for the whole economy when providing relief to just one segment of the population.

The hopes which attended passage of TAA proved exaggerated, however. Eligibility criteria written into the 1962 act were strict in requiring a demonstration that increased imports were the major factor in causing injury to an industry, firm, or group of workers, and that concessions granted under trade agreements were the major cause of the increase in imports. These criteria severely limited use of TAA under the 1962 act. From inception of the program through 1974, only 40,000 workers received benefits, and only a small number of companies were declared eligible for assistance.

TAA today

Organized labor in particular repeatedly urged a revamping of the program, and the eligibility criteria for TAA were eased substantially in the Trade Act of 1974—under which the current program operates. Thus petitioners (either companies or worker groups) need only show that a significant number of workers have been laid off, that a firm's sales have decreased, and that increased imports "contributed importantly" to the layoffs or decreased sales (rather than being the major cause of injury as before). It is these more liberal criteria that have permitted the recent surge—as the domestic auto industry has slid into deep recession—in the number of auto workers certified by the Labor Department as eligible for TAA benefits.*

*With the weakening of the economy this year, company petitions to the Commerce Department, which certifies firms as eligible for trade-adjustment assistance, have increased markedly. At 224 in the first four months of 1980, petitions ran almost two thirds higher than in the same period last year. This program is designed to aid smaller companies. A direct loan to any one firm is limited to $1 million outstanding at any one time. And loan guarantees—which cover up to 90% of a loan—may not exceed $3 million outstanding to one firm at one time. From the time the 1974 act took effect through April this year, 214 firms received financial or technical assistance totaling $273 million.

Those benefits (which can run for a year) are equal to 70% of a worker's average weekly wage up to $269 a week, but the TAA payment is reduced by the amount of ordinary unemployment compensation received by the beneficiary. Auto workers also receive supplemental unemployment benefits (SUB), negotiated by the UAW and paid by employer contributions, which bring their total benefits up to 95% of take-home pay. TAA payments usually are delayed several weeks, during which auto workers have been drawing unemployment compensation plus SUB payments equaling 95% of take-home pay. When the TAA payments arrive, auto workers are required to reimburse the SUB funds for any payments in excess of the 95% for the weeks covered retroactively by TAA benefits. The UAW seeks refunds from auto workers of overpayments to replenish the SUB funds. These were set up to see workers through short-term layoffs (arising, for example, from retooling) and are severely depleted now that a large part of the work force is on indefinite layoff.

Before TAA ballooned this year, moves were afoot to extend the program to workers in firms that supply parts or services (trucking, for instance) for products adversely affected by imports. In May of last year the House passed a bill to this effect, and the Senate Finance Committee has reported it out. But floor action was held up because of the auto situation and the government's budget-balancing exercise for fiscal 1981. As part of that exercise, the House Ways and Means Committee on June 18 rescinded passage of the House bill and claimed a legislative saving of $822 million—the current estimate of the cost of extending the program—in fiscal 1981. Though not a final disposition of the issue, the Committee action is a setback to proponents of extending TAA.

Authority for trade-adjustment assistance expires at the end of September 1982. In anticipation of that, Congress is expected to hold extensive hearings on the program next year. Among issues likely to be explored are whether TAA benefits should be triggered only after a worker has been out of a job for thirteen weeks, and whether more emphasis should be given to retraining and placement of workers in other jobs.

A useful shield

Meanwhile, it is to be hoped that TAA in providing a shield against hardship for auto workers will prevent the addition of a new layer of trade restrictions. Opponents of import restraints argue that Detroit's problems stem in large part from a recession-induced falloff in demand and from the fact that the industry has been slow to meet changing market demands for smaller, more-fuel-efficient cars. If, as a consequence of the UAW escape-clause action, the International Trade Commission recommends import quotas or increased tariffs, and if the Administration should alter its stance against protection, it is possible that the President will attempt to negotiate a so-called orderly marketing agreement with Japan setting limits on that country's vehicle exports to the U.S. This would be a less harsh remedy than the unilateral setting of quotas or raising of tariffs and is an approach that has been followed in recent years in some other escape-clause cases—for instance, with respect to color television imports from Japan and shoe imports from Korea and Taiwan.

Any action taken by the President doubtless will be influenced by the condition of the auto industry at the time he must make a decision —which could be as much as eight months hence. By that time a turnaround could have occurred in auto industry sales and employment, if the recession is short and if the new more-fuel-efficient cars to be introduced this fall prove successful.

In the meantime, because of the rapid deterioration of auto-industry fortunes, the Administration has been considering various alternative forms of help sought by the industry. At a meeting with the President in mid May, company and union leaders asked the Administration to look into tax and regulatory relief, measures to make easier credit available to dealers, and, in addition, the question of import relief. Secretary of Transportation Neil E. Goldschmidt has headed a study group on these matters, and it is expected to send its report to the President early in July.

Affording some form of relief to the domestic industry other than protection against imports would seem the preferable course to follow. With auto workers entitled to receive income maintenance payments under the trade-adjustment program for as long as a year, their welfare is protected to a far greater extent than that of workers thrown out of jobs for reasons other than government trade policy.

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The Recession: Now Comes Stage Two

THE adjustments that triggered the economy's steep second-quarter slide appear largely to have run their course. Consumer markets, while still far from buoyant, have stabilized after their sharp spring contraction. Retail sales rose in June following four consecutive months of decline. And sales of domestic autos moved up somewhat in July from the disastrous level of the prior two months. Consumer psychology was probably given a lift by the Federal Reserve's removal of the last vestiges of credit controls. Moreover, the unprecedented contraction of installment credit over the April-May period is a strong signal that households are beginning to improve their strained balance sheet positions.

Residential construction activity also has begun to turn around, mainly as a consequence of the decline in mortgage interest rates. Housing starts surged by 30% in June—a record monthly increase—although they still remained over a third below their year-earlier level. Also, outstanding commitments for future home lending were up significantly in June, and new home sales showed a strong rise in May.

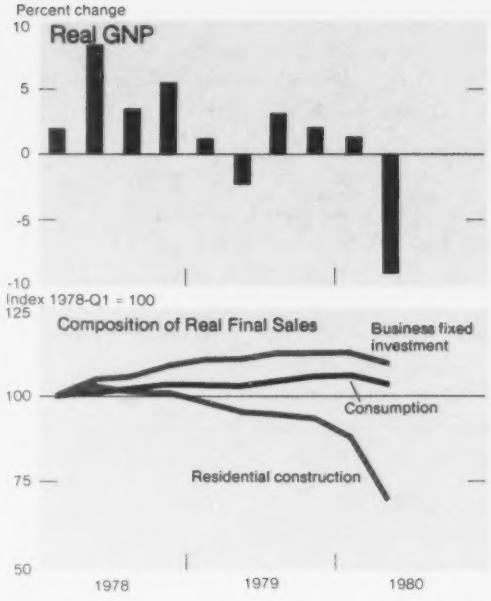
Second-quarter GNP statistics pointed up the major role played by slumping demand for motor vehicles and by the steep decline in new housing construction thus far in this recession. These two sectors alone—traditionally the most cyclical components of final demand—accounted for over 85% of the $34-billion drop in "real" (expressed in 1972 dollars) GNP in the April-June period. Thus, while the 9.1% (annual rate) drop in real GNP was as bad as any quarterly drop in postwar experience, a sectoral examination reveals extreme weakness in just

a few key segments rather than a broadly dispersed contraction. Indeed, real GNP exclusive of motor-vehicle and housing demand dropped at an annual rate of only 1½% in the last quarter—a smaller rate of decline than in three of five quarters of the 1974-75 recession.

Stage two

The recession is now entering its second stage. Given the apparent stabilization of the economy's most distressed sectors, the key to the near-term outlook lies in measures that the business sector takes to adjust its production schedules and capital-spending plans to the second-quarter plunge in final sales. To the extent that business spending is out of step with end-market demands, the response could be swift and deep, sparking further production cutbacks and increased unemployment, and possibly setting off another round of reductions in personal consumption. Fortunately, the evidence on prospective business spending trends, albeit tentative, does not suggest a state of imbalance that could lead to a more acute condition of cyclical distress.

Capital spending. As the economy neared its cyclical peak in 1979, capital spending was not characterized by the excesses that presaged the investment collapse of the 1974-75 recession. As that earlier cycle reached its turning point, a confluence of unusual factors—e.g., worldwide commodity shortages, hedge-buying of materials and manufactured goods, and speculative excesses in commercial building activity—increasingly tended to distort the investment decision-making process. Nonetheless, despite the absence of such developments in the current cycle, evidence from surveys and from orders and contracts for plant and equipment does imply that business fixed investment will



drop moderately in real terms over the balance of this year—a fairly typical occurrence for a period of recession.

Business inventories. The inventory situation has deteriorated significantly in recent months, and this presents a special challenge for business managers. Despite the liquidation of stocks in May, the ratio of total business inventories relative to sales (based on 1972 dollars) rose further in that month to a level virtually identical to that reached in the depths of the last recession. That recession, of course, was accompanied by the sharpest inventory adjustment of the postwar period. At present, the most precarious state of inventory imbalance is in the hardgoods factory sector, where stocks have been mounting since last year. But the problems of auto dealers remain acute and excesses also are starting to spill over to some nondurable industries such as chemicals and rubber.

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Despite the similarities between the degree of stock excess in the current period and in the 1974-75 experience, there are some important differences in the two cycles. The current situation has been dominated more by a weakness in sales than by an increase in inventories. Stocks in the aggregate were virtually unchanged in constant dollars from January to May; this stands in sharp contrast to the backup of inventories in late 1974. Thus, despite the relative severity of the current cyclical drop in sales, cautious inventory management has held involuntary stock-building to a minimum.

Excess stocks have mounted in the factory sector and since the book value of such inventories rose even further in June, production and employment adjustments should continue well through the summer. But in the trade sector real stocks at wholesalers and retailers combined already have been reduced by a sizable 1½% from January to May. In comparison, such liquidation did not occur until the final months of the last recession.

Policy choices

In sum, the apparent stability of motor vehicle and housing demand suggests that the first phase of the downturn may have run its course. The recession still has a way to go, of course, but the state of business-sector balance suggests that adjustments from here on are likely to be limited. In particular, the lack of inventory excesses in the trade sector—as compared with the large overhangs in late 1974—could facilitate a revival in economic activity as early as the fourth quarter of this year. Moreover, the prospect that the contraction of 1980 could turn out to be sharp but short was reinforced by the sizable increase in the composite index of leading indicators in June—the first rise of any significance in this forward-looking series in over a year.

Against that backdrop, the fashioning of public policy in an environment of persistent inflation takes on added importance. Prospective trends in fiscal policy are not reassuring. The Administration, in its midyear review of the federal budget, revised its estimate of the deficit in the year ending September 30 to $61 billion, almost $25 billion greater than the figure released last March. What's more, a $30-billion deficit now is expected for the subsequent fiscal year, even without a tax cut.

Keenly aware of the added inflationary thrust of fiscal policy, the Federal Reserve has reiterated its commitment to slow the expansion of money and credit through 1981. Moreover, Chairman Volcker has indicated that for this year as a whole the Fed may well tolerate a shortfall in the more narrowly defined monetary aggregates relative to previously specified ranges. This could mean that, despite the recent technical move to bring the discount rate in better alignment with money-market conditions, interest-rate declines will be limited in the months ahead.

At this juncture, a policy of modest restraint seems advisable since, even with the sag in economic activity, there is no evidence that there has been any fundamental easing in the economy's underlying rate of inflation. Wage costs, in particular, have continued to accelerate. Moreover, policymakers cannot be unmindful of the position of the dollar in foreign exchange markets. For all these reasons, prudence suggests the avoidance of any quick-fix countercyclical remedies.

Check Processing: How Much More Will It Cost?

LAST year Americans pulled out their checkbooks and wrote some 38 billion checks, roughly 175 checks for each man, woman, and child in the country. That such a paper avalanche moved swiftly through the banking system was due in no small part to efforts by the Federal Reserve, which clears roughly 40% of total check volume.

The Fed has been performing check-clearing services for free. Now, however, that is all going to change. The Fed is getting ready to start charging fees—and not only for each check that it handles but also for "float," the credit it extends to banks for checks that haven't been collected on schedule. A requirement for pricing of Fed services is part of the Monetary Control Act of 1980,* which also instructs the Fed to cut reserve requirements significantly for member banks and extend them to nonmember banks for the first time.

The Fed's earnings from check handling and float could total $500 million a year—most of which will flow into the coffers of the U.S. Treasury, which receives under long-standing arrangements virtually all of the Fed's earnings.** The ramifications of such fees are far from certain. Since the banking system's overall cost of processing checks will increase, consumers and business could very well face higher charges for checking-account privileges. And "electronic banking" may be given a boost in light of the rising costs for paper-based money transfer via checks.

Congress recognized the effects its action might set in motion and saw an additional need: to offset the curtailment of Fed earnings that is implied by the Monetary Control Act's reduction of member-bank reserve requirements. Services pricing, that is, was seen as a way to prop up the Fed's earnings—and its payments to the U.S. Treasury.

Check-collection in practice

A considerable number of the checks which a bank receives for deposit are drawn on accounts at other banks. In order to collect these checks, the receiving bank must present each item to the bank on which it is drawn. In some cases, two banks can exchange checks directly and settle up as to amounts owed each other. Given the size of the banking system, however, this is often a cumbersome arrangement. As a consequence, banks in major cities have gotten together and established local "clearing houses," where member banks clear checks drawn on one another. Even so, that still leaves a large volume of checks to be collected by other means. There are two alternatives. A bank may send checks for collection to another bank—a so-called correspondent—at which it maintains a demand-deposit account. Then, its correspondent will collect the checks on its behalf. Also, if a bank is a Fed member, it may send checks to the Fed for collection—a service

*The law isn't explicit as to when such charges must begin, but requires that by September 1, 1981, "the Board shall begin to put into effect a schedule of fees" for its services. Besides doing so for check clearing and float, the Fed also will have to charge for a variety of other services: currency and coin, wire transfer, automated clearing house, settlement, and securities safekeeping.

**There will be a partial offset to additional Treasury revenues from Fed service charges. Aggregate corporate profits will tend to be reduced by the imposition of Fed service fees, leading to lower corporate tax receipts at the U.S. Treasury than would otherwise occur.

which, under the Monetary Control Act, the Fed will be making available to nonmembers as well.*

Whether a bank deposits checks with the Fed or with a correspondent, procedures are much the same. The depositing bank is assigned credit for the checks it has deposited according to a fixed time schedule. Checks drawn on banks which are sufficiently close-by are credited by a bank's correspondent (or by the Fed, if it is processing the checks) on the same business day as they are received. Checks drawn on more distant banks are credited with a set delay—either one or two business days—depending on distance and available transportation. The main stipulation is that a depositing bank has to deliver the checks to the Fed or its correspondent by certain cut-off times in order to be given availability of funds on the scheduled day.

Those inevitable delays

Despite the best of efforts, some checks do not get collected so rapidly as expected. But private correspondents have a powerful incentive to avoid late collections. A bank which fails to collect a check as soon as it has credited the proceeds to its customer is in effect making an interest-free loan to the depositor. Too much of that, and returns on check-processing turn into losses. The effort of private-sector clearers to adhere to time schedules is therefore a simple matter of dollars and cents.

At the Fed, however, since the check-clearing objective isn't profits, there has not been the same incentive as at a private clearer for adherence to check-collection schedules. Indeed, the Fed has allowed in its planning for delayed processing of some of the items it receives for clearing—and thus for the probability that some checks would end up being credited before being collected.

This is where float comes in. When the Fed provides credit to a depositing bank before it has received payment for a check being processed, Fed float is created. On the relatively infrequent occasions when the Fed completes its processing and collects on a check before passing funds to the depositing bank, Fed float is reduced. Float is thus a net measure of the Fed's on-time performance in processing checks. Its volume can be affected by a wide variety of factors, including peak loads, breakdowns in computer equipment, and transportation delays (box on this page).

Float has varied considerably in magnitude over recent years (chart on page 6). It was reduced considerably in the early 1970s, as the Fed acquired high-speed equipment for sorting checks, arranged for improved air-freight services, and eliminated a one-day delay which country banks were formerly allowed in covering their customers' checks. A significant improvement in check collection also resulted from the establishment by the Federal Reserve of a

*Nonmembers are already able to deposit some checks at the Fed's Regional Check Processing Centers.

FLOAT AND MOTHER NATURE

WEATHER can cause Fed float to show wide gyrations. One case history, in brief:

On Monday, February 19, 1979—Washington's Birthday—a blizzard tied up the East Coast. Snowfalls of one foot to nearly three feet in some places bogged down transportation and snarled the processing of three days' checks.

Result: float, which had averaged $6.4 billion in the Fed statement week ended February 14, nearly doubled to $12 billion in the week ended February 21.

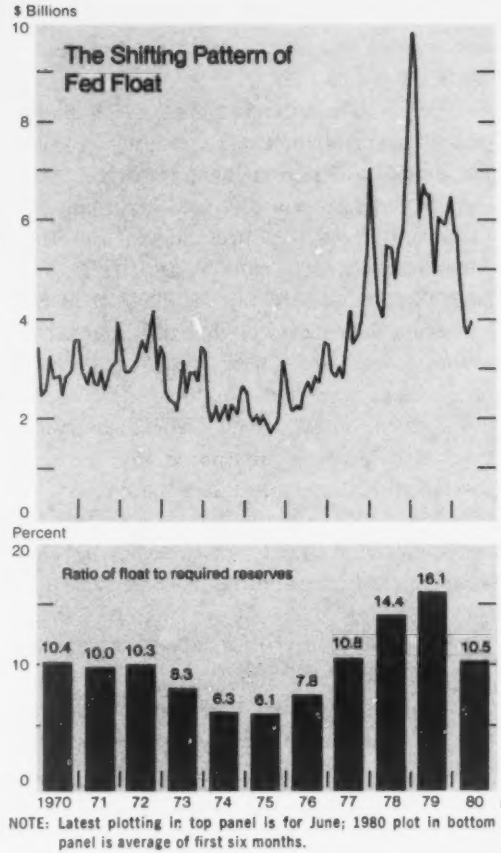
system of Regional Check Processing Centers.

Float began rising sharply after 1975, however, and the Fed has come in for significant criticism over that development. At issue has been the effect of Fed float in providing reserves to member banks with which they can satisfy some of their reserve requirements. Float, thus, curbs Fed earnings and that has been a principal reason for criticism (particularly in Congress) of expanded float.*

One reason, of course, why float might have expanded is that more and more checks, having a larger and larger value, are written and processed each year. But in analyzing the increase in float occurring from 1975 to early 1979, the Fed itself has concluded that higher float was only partly explained by enlargement in the value of the checks it was processing. And while bad weather in the winter of 1978-79 caused significant gyrations in float at the time, the fact is that float was already elevated before the bad weather hit.

In explaining the enlargement of float, the Fed put emphasis on internal budgetary constraints, citing in particular cost-containment efforts which caused the Federal Reserve banks "to be reluctant to add resources in order to control float." In addition, the Fed has said that controlling float had, for a time, a lower priority in the Federal Reserve System than did other operational-improvement projects.

The Fed also has blamed the enlarged float partly on the increased use by corporations of the technique known as remote disbursement—i.e., the issuing of checks drawn on banks which



NOTE: Latest plotting in top panel is for June; 1980 plot in bottom panel is average of first six months.

are located a long distance away from the payees of those checks. (For example, a Connecticut company owing money to someone in New Jersey might make payment with a check drawn on a bank in rural Arizona.) That increases the expected time required for clearing checks and heightens the chance that something unexpected could stretch out the check-clearing process. It gives remote-disbursing companies the use of their funds for a longer period. And, as the Fed has observed, it also requires that extra resources—for example, more airplanes—be used in clearing checks.

*From an accounting standpoint, member-bank reserves are a liability of the Federal Reserve banks. When created via open-market operations, bank reserves are matched on the asset side of Fed balance sheets by U.S. government securities, which are earning assets. When reserves are created via the existence of float, however, the matching assets are cash items in the process of collection by the Fed, and are nonearning.

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Early in 1979, the Federal Reserve announced a formal effort to discourage remote disbursement. It also announced the establishment of annual targets for Fed float, indicating that greater System effort would be devoted to speeding check collection. And it lengthened some of its availability schedules—requiring banks to wait longer before receiving credit for some items they deposit with the Fed for clearing. As a consequence of its actions—and assisted by better weather—the Fed has succeeded in paring float significantly from its 1979 peak.

Float: what's it worth?

With enactment of the Monetary Control Act, the float question has been given an extra dimension. As an item that has to be priced, the Fed must reckon with assigning a value to float. Presumably, the total value of float is the interest forgone by the Fed because of delays in check collection. Thus, if yields on Treasury bills are, say, 7%, then every billion dollars of float might effectively cost the Fed some $70 million a year. But who should be charged for that value? That's a much tougher question.

The principal difficulty is in identifying specifically where float arises. Most checks do not generate any float. Ideally, the Fed should know what portion of float is associated with the checks drawn on each individual bank. Then it could impose on each bank a charge for the float created by its customers' checks. That would at least make the practice of remote disbursement more costly and perhaps tend to discourage it somewhat.

As a practical matter, such a system of charges simply isn't feasible. The cost of keeping the necessary records for billions of check transactions would be prohibitive. Yet assigning the cost of float by any other scheme—e.g., by raising check-clearing charges generally—would shift the burden away from those responsible for its existence. That would violate a major efficiency criterion—that costs be shouldered by those that create them.

In the past, when the issue of pricing of services was still an open one, the Federal Reserve viewed charges for its float as unattractive. The Fed was concerned, in part, about whether float could be priced in a rational manner. But in addition, the Fed considered a certain amount of free float to be necessary if it was to fulfill a role in providing check clearing for all areas of the country—even those that are sometimes difficult to reach. Assuring a reliable flow of credit in the economy meant, according to the Fed, absorbing at least the float resulting from storms, natural disasters, and other random events. Now that the law calls for charges on float, the Fed will have less latitude on this issue. However, by attempting to reduce float further, the Fed can at least limit the problem it faces in charging for float.

Fed options

One often-heard suggestion is for the Fed to make changes in its schedule for giving availability to depositing banks of the proceeds of checks it clears. This could be accomplished by requiring banks to deliver some checks for processing earlier than at present (a midnight deadline might be moved back to 10 p.m.) or by deferring credit for some items by an extra day. Either type of action would clearly—and instantly—reduce float.

In general, this would encourage banks to reduce their reliance on the Fed for processing of checks. That effect is illustrated vividly by a change in Fed availability schedules which occurred last year, concerning checks drawn on

banks in San Francisco and deposited with the New York Fed for collection. Until 1979, the Fed's rules provided that if such items were delivered to the New York Fed by 7:30 p.m. on a particular day, credit for the checks would be given by the Fed to the depositing bank on the next business day. Under those rules, member banks in New York cleared most San Francisco checks through the Fed. That is no longer true, however—not since the Fed designated San Francisco as a "two-day point," delaying payment to depositing banks for an extra business day.

Now, when a New York bank receives checks drawn on banks in San Francisco, it packages them up and ships them to a California correspondent by air freight. So long as the checks reach its West-Coast correspondent by 5 a.m. or so (which means that the checks must leave New York by 8:30 p.m. the previous evening), credit for the checks will be available on that same day.

Such consequences of changes in availability may not be constructive. In some specific cases, it is probably appropriate for the Fed to alter its availability schedules to conform more closely to average collection times. But it seems apparent that the Fed, in the collection of San Francisco checks for New York banks, has taken itself out of the market almost entirely. Other similar examples abound. For the Fed to delay unnecessarily the availability of funds when it is clearing checks fails to promote either the efficient allocation of resources or the provision of basic payment services country-wide.

The most promising means of reducing Fed float is for the Fed to strive for greater efficiency in the payments system. Among the obvious possibilities is a thoroughgoing review of System check-clearing procedures, and this is one of the aspects of the Fed's current float-reduction plan. But there is also a particular need to encourage the growth of electronic transfers as a substitute for payments via check.

More people and planes?

Of course, the Fed also might devote a greater volume of resources to the clearing of checks. The Fed could buy faster equipment for reading and sorting checks; it could add enough equipment to help it cope with peak loads and with equipment failures; it could hire more people; and it could charter more planes. Check-clearing schedules would tend to be met more often and could conceivably be speeded up. But if the Fed does these things, it will still have to pass the associated costs on to its "customers." Under the law, the Fed will have to base the prices for its services upon all direct and indirect costs incurred, including an allocation for the taxes that would be paid and the return on capital that would have been earned by a private-sector provider of those services.

In order for such outlays to make economic sense, the Fed would have to possess the capacity to clear checks more efficiently than its private-sector competitors. This is a possibility, since the Fed might have economies of scale on its side. But the private sector, for its part, has the profit motive to spur it on. And that may well make it equally or more efficient. Thus it is questionable whether the Fed can retain its present role in providing check-clearing services. If the Fed competes with private-sector clearers on the basis of relative efficiency, however, it can at least be expected that economic rationality will result.

Postponing the Gold Watch

ONE of the most pronounced and unwavering trends in America's work force in this century has been the steadily dwindling participation of older workers. In 1900, roughly two out of every three men aged 65 or older were at work or looking for work. By 1950, just under half of that age group was in the work force. And by the mid 1970s, only about one man in five aged 65 or older was in the labor ranks.

For older women, the pattern has been similar but far less spectacular. Among women 65 or older, labor-force participation—always much lower than for men—dropped from roughly 10% in the mid 1950s to just over 8% by the mid 1970s.

Now, however, that long-term trend seems to be changing, both for male and female workers. Severe inflation and changes in government and corporate attitudes toward older workers are making retirement a less alluring prospect. In the past few years the decline in labor market activity of older workers has slowed markedly. Even more significant, there is a good chance that the decade of the Eighties will see a reversal in the historic pattern: a rising, rather than a falling, participation rate for older workers. (For the varying designations of an "older" worker, see box on page 12.)

Such a reversal, if it occurs, would help to mitigate a squeeze in labor markets in coming years. The U.S. work force is expected to grow much less rapidly in the 1980s (up less than 12%) than it did in the 1970s (up 21%), owing to the low birth rate of the last two decades. As a consequence, there will be a rising demand for older workers. Tapping that repository of experience and know-how will be helpful at a time when the nation faces problems of lagging productivity. No less important, as a larger proportion of workers in their sixties continues to work, pressures on the nation's retirement resources will ease.

To be sure, the changing attitudes of older workers are not universally cheered. Workers in the "prime" age group (25-54) fear that promotion channels may be clogged as older workers stay on. And some companies are concerned about rules under study at the Equal Employment Opportunity Commission. For example, one EEOC proposal would require employers to accrue pension benefits for those working past 65. Another would extend pension coverage to persons hired within five years of normal retirement age. Current federal rules require neither. Some companies complain that added costs resulting from such rules may create an impediment to hiring of older workers.

Incentives to quit

Government policy, until fairly recently, has encouraged older workers to pack it in. The chief inducement: an enhanced financial ability to retire.

It all began, of course, with passage in 1935 of the Social Security program, which provided a government pension at age 65. (The perception during the Depression was one of "surplus" labor; retirements would open up jobs for younger workers.) Retirement was made considerably more attractive in 1939 when the Social Security program added a 50% benefit for spouses of retirees. In 1956 women aged 62 to 64 became eligible for reduced retirement benefits. Similar coverage was extended to men in 1961.

Disability insurance was built into the So-

cial Security system in 1956. It provided benefits for disabled workers aged 50 and older. Later legislation provided benefits for the dependents of disabled workers, and protection was extended in 1960 to disabled workers regardless of age.

Retirement payments under Social Security, all the while, have grown steadily. In 1940, the average monthly benefit was $22. In July of this year, the average monthly check was $330 —helped, in important part, by an escalator (introduced in 1972) that ties Social Security benefits to the cost of living.

Private pensions, too, have played a role in encouraging older workers to abandon the job market. More than 30 million workers are now covered by private pensions, up from only 10 million in 1950.

Against this background of more people having financial resources if they stop working, labor market activity of the 65-and-over group, until recently, has shown a steady decline. For example, among men aged 65 or older the labor-force participation rate was cut in half between 1955 and 1976. Significantly, however, since then labor market activity of the 65-and-over group has shown no decline. Similarly, the participation rate of male workers aged 60-to-64 dropped sharply between 1955 and 1976; since then it has shown only a small decline.

Among older women workers, as the table shows, those 65 or older in the work force, after dropping for 20 years, have shown no change since 1975. The participation in the job market of women in the 60-to-64 age group last year actually was a bit higher than in 1975 and noticeably higher than in 1955. The steady rise in the number of females choosing to enter the work force has offset the number of women electing to retire.

Looking ahead to 1990, analysts at the Bureau of Labor Statistics (BLS) expect a decline in the labor-force participation rates for older workers (chart on page 11). Those projections, however, are merely mechanical extrapolations of past trends and make no allowance for changing economic and social conditions that increasingly will affect labor market activity among older workers.

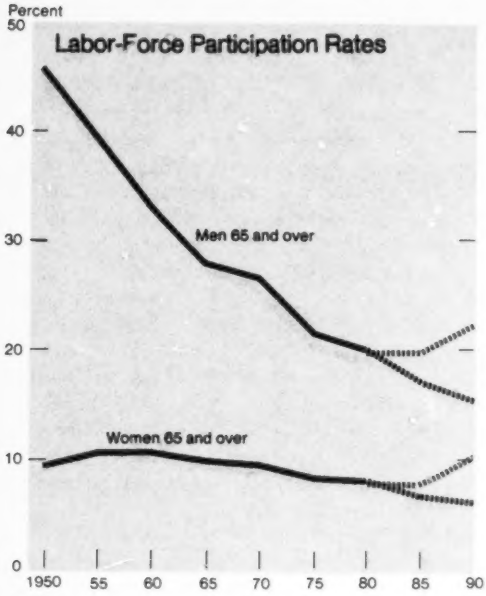
Incentives to stay on

Many private analysts believe that the BLS may be seriously underestimating the number of older people who will continue to work. For example, demographers at the Work in America Institute, a nonprofit research organization, expect the labor-force participation rates of older workers to move sideways in the next few years and then to move up rather briskly (colored line in the chart on page 11).

Labor-Force Participation Rates

(Civilian labor force)

	Men		*Women*	
	60 to 64 years	*65 and over*	*60 to 64 years*	*65 and over*
1955	82.5	39.6	29.0	10.6
1960	81.1	33.1	31.4	10.8
1965	78.0	27.9	34.0	10.0
1970	75.0	26.8	36.1	9.7
1971	74.1	25.5	36.4	9.5
1972	72.5	24.4	35.4	9.3
1973	69.0	22.8	34.2	8.9
1974	67.9	22.4	33.4	8.2
1975	65.7	21.7	33.3	8.3
1976	63.7	20.3	33.1	8.2
1977	62.9	20.1	32.9	8.1
1978	62.0	20.5	33.1	8.4
1979	61.8	20.0	33.9	8.3



SOURCE: Bureau of Labor Statistics data shown in black line. Colored line shows projections for 1980-90 by Work in America Institute.

Government policy, which formerly encouraged older workers to retire, now is tilting in the other direction. The Age Discrimination in Employment Act now prohibits making retirement, except from specified types of positions, mandatory before 70. The idea behind the amendment was that individual ability to perform a job, rather than an arbitrary age-65 limitation, should be the basis for continued employment. Added encouragement for extending work life is contained in the 1979 change in the Social Security law that gives retirees a 3%, instead of the earlier 1%, increase in benefits for each year that they postpone retirement past age 65.

Rising inflation (up at an annual average rate of 7½% in the Seventies—measured by the consumer price index—as against 2½% per year in the Sixties) undoubtedly has caused many a prospective retiree to have second thoughts. At today's underlying rate of inflation of close to 10%, the buying power of the dollar would be cut in half in a scant seven years. At inflation rates like those, many older workers' dreams of leaving the job for the backyard hammock or the golf links would become unaffordable. However, if a taming of inflation should occur--down, say, to a manageable 2% or 3% per year—the recent powerful inducement for older workers to stay on the job surely would dissipate to an important degree.

Inflation's inroads are blunted, as noted earlier, by cost-of-living escalators for Social Security checks. Most private pensions, however, are not automatically raised in line with living costs—one more reason why older workers are now revising their ideas about quitting the job. Finally, as machines have taken over more and more of the arduous, boringly repetitive, physically draining tasks, older workers are more inclined to keep on working.

Needed: more older workers

Decisions to keep working by more and more older workers have been applauded, both for economic and social reasons, by study groups in and out of government. In May, for example, the President's Commission on Pension Policy urged that, "Older workers should be encouraged to remain in the work force to add to their retirement income, increase productivity, and contribute to their psychological well-being."

That would appear to be sound advice, given the fast-growing number of older citizens in this country (there will be 32 million persons aged 65 or older by the year 2000 as against 24 million in 1979) and the prospective burden of financing costs for future retirement programs.

Consider the so-called dependency ratio. That ratio, shown in the table on page 12,

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WHAT'S AN "OLDER" WORKER?

AN official age designation for "older" workers depends on which agency is cited. Federal anti-discrimination law uses age 40 as the dividing line between younger and older workers. The Bureau of Labor Statistics thinks in terms of workers 55 or more; "prime" workers, according to BLS, are contained in the 25-to-54 age group.

Many employers think of workers as being in the older category when they enter their fifties; by the mid sixties, of course, workers used to be deemed ready for the retirement rolls. Those ideas have changed now that the mandatory retirement age for most workers has been pushed up to age 70.

Efforts to extend work life recognize that Americans are healthier and are living longer. The death rate for people over 65, for example, has dropped 14% in the past decade. At age 65, average life expectancy is another 15 years; at age 75 it is another ten years. At the turn of the century average life expectancy at birth was 45 years; today it is over 70 years.

Dr. Robert N. Butler, director of the National Institute on Aging, draws a distinction between the "young old" and the "old old":

"It is almost as if there are two groups of aged: those who are healthy, vigorous, and contributing, and those who, as a consequence of aging, have protracted economic and emotional dependencies; they tend to be 75, 80, and above."

A recent study by the Work in America Institute found the following traits of workers 50 and older: they have fewer absences than younger workers; they have fewer on-the-job accidents; they are more satisfied with their jobs; they have less stress on the job than younger workers; and they show lower rates of admission to psychiatric facilities.

Advised the Work in America Institute: "Within a work group, a balance of ages is desirable to temper the energy and risk-taking of younger people with the maturity, prudence, and experience of older people. Particularly during business downturns, the experience and caution of long-service employees may be useful."

refers to the number of persons in the 65-and-over age group, predominantly made up of retirees, for every 100 persons in the group aged 18 to 64, in which active workers predominate.

Dependency Ratio 1950 to 2020

Year	1950	1970	1980	1990	2020
Ratio	13	17	18	19	24

The dependency ratio has increased by about two fifths since 1950, and it is expected to increase by another third as the baby-boom generations of the 1950s and 1960s reach retirement age in the first quarter of the next century.

With demographics like those, it is clear that sharp increases in taxes on workers and companies will need to be imposed in order to finance the retirement costs of nonworkers. Already, many workers and employers are grumbling about the steep rise in Social Security taxes. From the original levy of 1% of the first $3,000 of wages, the Social Security tax paid by the worker has climbed to 6.13% of the first $25,900 of wages—a tax matched by the employer. Further Social Security tax increases lie ahead (some actuaries see a need for a doubling by the end of the century), raising the very real possibility of tax rates that would be unacceptable to workers.

To head off such taxes, pension analysts are warning that retirement rules need to be re-

vamped. Suggestions have been made, for instance, to raise the age now at which a worker could receive his Social Security pension to 67 or 68 from the present 65. Others oppose such a move, however, on grounds that it would violate a solemn contract with working people today who are approaching retirement age. A better approach, it is suggested, would be to base retirement in the future on average life expectancy rather than on an arbitrary age 65.* Thus, with increased life expectancy, workers could expect to retire at a later age, but they could still expect a constant proportion of their adult lives to be in retirement. In short, as life expectancy increases, it would only be fair to expect the retirement age to rise.

Need for new policies

If the recent inclination of older workers to stay on the job is to be encouraged, changes are needed both in government and private policies.

The biggest disincentive to work within the Social Security system is the so-called earnings test. Currently, if retirees aged 65 to 72 have earnings of over $5,000 annually, $1 in benefits is withheld for every $2 earned above the limit. For people aged 62 to 64, the earnings limit is $8,720; and there is no limit for persons aged 72 and over. Raising the amounts that could be earned without a reduction in pension benefits would encourage retirees to work.

Under many private pension plans, retirees are expressly prohibited from engaging in work similar to that performed for the employer before retirement. To do so is to risk reduction or cancellation of the worker's pension. Such provisions need reexamination in today's world.

Some employers, in order better to accommodate both the skills and the limitations of older workers, are restructuring jobs. Among the new approaches: so-called flexitime, in which employees are able to set their own working hours within limits; permanent part-time jobs; and compressed work weeks, in which the usual work week is completed in fewer than five days. Some companies have even permitted two older workers to share one full-time job.

Personnel officials, facing up to the fact of an aging population and an aging work force, are now considering varied approaches to retirement. One idea getting attention is labeled "Flexible Retirement Options," under which a worker can take early, normal, late, or even gradual retirement. The forerunner of such plans was adopted in Sweden in 1976. It is called the National Partial Pension Program. The plan allows partial pensions between ages 60 and 65 provided the worker averages 17 hours of work a week. The pension makes up 65% of the income lost by one's taking part-time work. Generally, the income from both the partial pension and part-time work adds up to 85% to 90% of previous full-time income.

In America, expanded pension options and ways to extend work life are in the early stages of development. Fast-moving economic and social circumstances can be expected to focus increased attention on the changing role of—and the increased need for—America's older workers.

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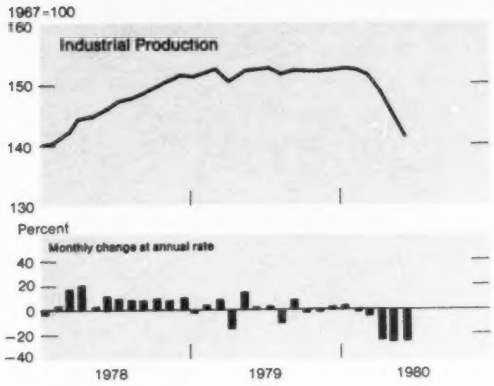
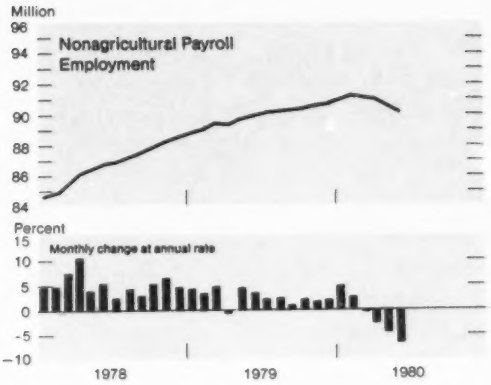
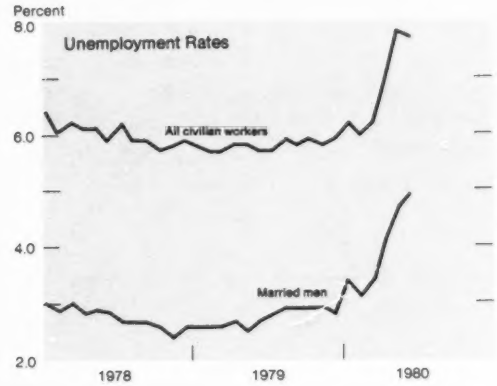
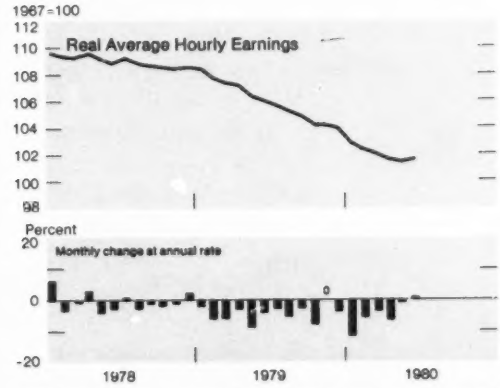
*Today, people are living, on the average, about three years longer after age 65 than when Social Security first started paying old-age insurance benefits.

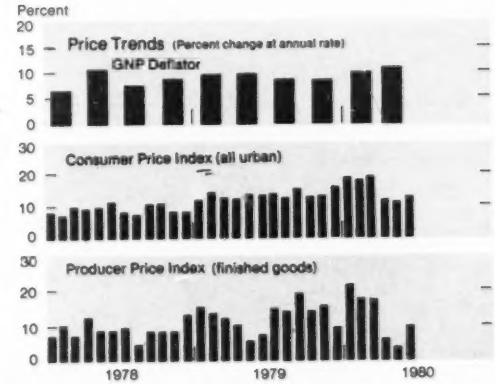
ECONOMIC INDICATORS











NOTE: Latest plotting in each chart is for the month of June. All data are seasonally adjusted. Average hourly earnings are adjusted for overtime hours in manufacturing and for interindustry employment shifts.

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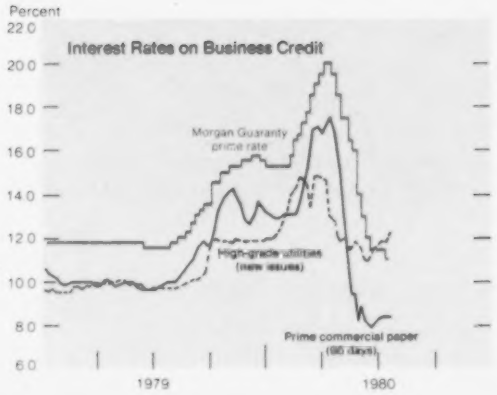
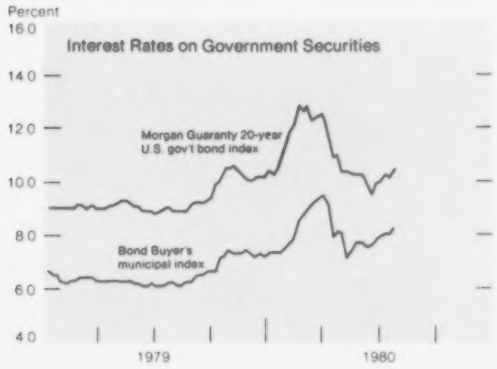
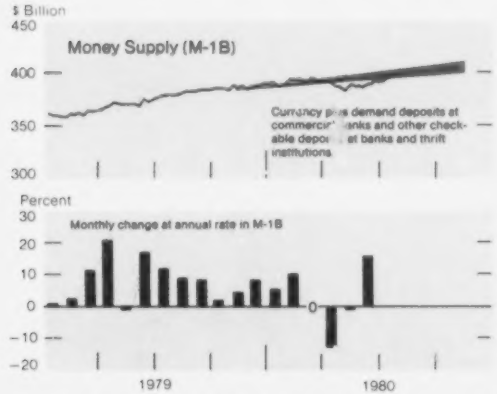
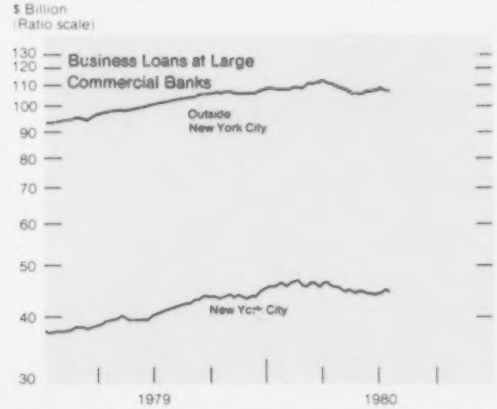
MONETARY INDICATORS






$ Billion
Money Supply (M-1B)
Currency plus demand deposits at commercial banks and other checkable deposits at banks and thrift institutions
Percent
Monthly change at annual rate in M-1B
1979
1980



NOTE: Shaded area on the money supply chart represents the Federal Reserve growth target for the period from the fourth quarter 1979 to fourth quarter 1980. Business loans are net of bankers' acceptances and of commercial paper held by banks. All data except interest rates and member bank borrowings are seasonally adjusted.

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Policy Uncertainties

LATEST indicators suggest that "real" final sales in the economy—that is, inflation-adjusted GNP less inventory investment—could actually show a modest increase in the third quarter. The tone of retail demand has improved considerably following the disruptions of last spring. Housing activity also is stronger than it was. Moreover, spending by business does not appear to have weakened appreciably further. And, significantly, new order, labor market, and leading indicator data suggest that most of the recession's production and unemployment adjustments have already been felt.

Against that backdrop, it seems likely that the depressant effects of businessmen's efforts to adjust inventories downward (something that is likely to continue throughout this year) are being largely offset by gains in final sales. GNP, thus, may show relatively little further decline for the third quarter. Such a development would be supportive of those forecasters who have been projecting a short recession. Additionally, a near-term trough for the cyclical contraction, if that is what in fact materializes, would argue that, had it not been for the extremely negative influence of credit controls during the second quarter (article on page 4), the recession might well have been of very moderate character.

Even though an early trough in economic activity is distinctly possible, however, there are limited prospects for the kind of vigorous recovery that has typically followed cyclical contractions. Indeed, the outlook for the shape of the recovery remains clouded. This reflects, most importantly, the mounting ambiguities surrounding the future path of monetary and fiscal policy.

As the 96th Congress winds down, Washing-

ton has been caught up in a flurry of tax-cut discussion. However, as prospects for an early bottoming of the recession have grown, chances have dimmed that a tax cut will soon be enacted. Nonetheless, it remains likely that major tax reduction (of something like $30 billion in total and skewed somewhat more than most omnibus bills have been in the past toward investment stimulus) will be approved next year. Without a reduction in tax rates, the federal budget, as measured on a high-employment basis, would continue to swing in the direction of restraint. Such a development—the product mostly of already legislated Social Security tax increases and "bracket creep"—could impede a strong recovery, let alone the relatively sluggish expansion that is widely expected.

Monetary policy

Uncertainties exist, as well, with respect to monetary policy—particularly as to whether the Fed will continue to let interest rates drift upward. Since mid-June, a significant rise in interest rates has occurred (table on page 3), and it would have been inconsistent with the Fed's dominant operating objective of managing monetary growth (which has been brisk) to try to counter that rise. An early reversal of the steep decline in rates which occurred last spring generally had not been anticipated, although such a development is not without some historical precedent. As the table shows, in the early phases of both of the last two recoveries (though not in the recession phases themselves) the downward trend in interest rates was temporarily interrupted by substantial backing up in rates. The question now is whether what's been happening to interest rates recently represents just a temporary upswing that will be reversed or something that will be sustained.

The last time that interest rates bottomed in the vicinity of a recession trough and then moved up for an extended period was in 1958. Then, as now, the Fed was intent on combatting the inflationary forces which had survived the recession. Now, however, the Fed is committed to keeping the growth of the monetary aggregates within specified target ranges, even at the expense of substantial short-term variability in the Federal funds rate. Since all of the principal aggregates grew rapidly over the summer, it would appear that the potential for continuing upward pressure on the funds rate and other short-term rates is considerable. How much vitality can the economy exhibit in such an environment?

The 1958 recovery lasted only two years. But it would be premature to predict a similarly short recovery this time. To be sure, it is easy to point to areas of potential vulnerability in today's economy. The recovery in housing is particularly open to question. The recent rise in mortgage rates, should it continue, will begin to eliminate potential buyers who would find themselves constrained by mounting financing costs. Thrift institutions are also likely again to be squeezed for funds if short-term rates remain high enough to eliminate the differential which they had been allowed to offer over commercial banks on six-month certificates.

Countering these negative influences on housing, at least to some degree, will be the strong underlying demand in that sector resulting both from demographic changes and from a long period of underbuilding. But even if housing remains weak in the next few quarters, it does not automatically follow that the economy will lapse back into a recession. Spending in other sectors may take up the slack. Now that consumers have reduced their outstanding installment debt by roughly $9 billion in a three-

Recent Interest Rate Movements: How They Compare

	1980			*1975*			*1971*		
	Mid-June	*Late August*	*Change in basis points*	*Mid-June*	*Early October*	*Change in basis points*	*Mid-March*	*Early August*	*Change in basis points*
Federal funds	9.68	10.87	+119	5.15	6.36	+121	3.90	5.65	+175
3-month Treasury bills	6.44	10.35	+391	5.00	6.46	+146	3.28	5.29	+201
Prime commercial paper	8.03	10.30	+227	5.63	6.93	+130	4.13	5.88	+175
Morgan Guaranty "prime rate"	12.00	11.50	−50	7.00	8.00	+100	5.50	6.00	+50
New Aa utility bonds	10.88	12.75	+187	8.85	10.00	+115	7.45	8.15	+70

month period—an unprecedented rate of reliquefaction—they may be poised to step up the pace of their spending on a wide range of goods and services, particularly if they perceive inflation to be reaccelerating. (It is worth remembering that at the start of virtually all recoveries, with the experience of recession still fresh, economists invariably have had difficulty foreseeing from what particular sources the economic strength to sustain a recovery will come.)

And it may prove to be the case that much of the concern over Fed policy is unwarranted. The Fed has already demonstrated a willingness to show flexibility in the pursuit of its monetary growth goals. Last spring, for example, the funds rate was not permitted to fall so far as would have been necessary to keep the aggregates within their respective target ranges. The volatile behavior of the aggregates in recent months is consistent with the view that the short-run relationship between Fed actions and money growth is too uncertain for the Fed to expect to achieve its targets month by month.

Just as the April collapse in the aggregates was quickly reversed, despite the Fed's unwillingness to let the funds rate drop below 8½%, so too may the recent surge in money growth be turned around without too sharp a rise in the funds rate. And just as concern for the international value of the dollar was a legitimate reason for tolerating a temporary undershooting of the aggregates targets, so too could a concern for the recovery of the domestic economy be a valid argument against too rapid a run-up in the funds rate now to stem what may be only a temporary bulge in money growth.

In short, it is too soon yet to embrace the increasingly discussed possibility of a "double-dip" recession—that is, a business cycle whose recovery is aborted in its early stages. Indeed, the present performance of the economy is suggestive of the possibility of greater-than-expected strength. Even, however, if the economy should sputter in its early efforts at recovery, there should be no presumption that policy makers would stand idly by and watch the recovery grind to a halt.

Looking Back on Credit Controls

THE nation's first venture into potentially all-inclusive credit controls—provided under the Credit Control Act of 1969—has now passed into history. Before memories fade, a brief look back at the program and its impact (positive and not so positive) seems in order.

Last March 14, President Carter, as part of his anti-inflation program, invoked the Credit Control Act, a measure that had been unused in the eleven years it had been on the books. Federal Reserve officials moved quickly, if perhaps not enthusiastically, to restrain credit growth.* (Provisions of the Fed's Special Credit Restraint Program—SCRP—are shown in the box on page 5). The program was partially rescinded on May 22 (just nine weeks after its institution) and then fully terminated on July 3.

On the positive side, the credit control effort is thought by some analysts to have played a key role in lessening rampant inflation psychology. Still, the controls—particularly those on consumers—did produce shocks which jarred the economy as never before. Fortunately, the negative effects did not cumulate, but another time the nation might not be so lucky.

Unprecedented powers

The Credit Control Act gives the Federal Reserve authority that is more far-reaching than Congress ever before had granted, even during World War II. The Fed can "prohibit or limit any extensions of credit under any circumstances the Board deems appropriate." Not only are all individuals and companies covered but also federal, state, and local agencies.

In theory, the Fed could decree, as one Congressional opponent of the measure observed, that a patient could not go to a doctor unless he paid cash. The Fed did not, of course, choose to take such an extreme measure, but it is worrisome to many people that the authorizing statute is so sweeping that action of a credit-limiting nature, no matter how capricious, would not be ruled out. Indeed, Arthur Burns, former chairman of the FRB, has urged repeal of the Credit Control Act because it puts "dictatorial power in the hands of the Federal Reserve, power that no government agency should have."

As actually administered, the Fed's program was confined to selected private credit markets. Even so, the effects were far-reaching and, often, unanticipated. The latter was almost inevitable; in a vast, complex economy controls —with their elaborate rules, interpretations, ex-

*Scarcely a month prior to imposition of credit controls, Fed officials had been stating publicly their opposition to such measures and questioning their value.

ceptions—are bound to cause confusion and uncertainties.

The effects of wide-scale controls on consumer credit illustrate the point. Controls blanketed the field: banks, credit unions, thrift institutions, finance companies, retail stores, oil companies, and travel and entertainment credit-card concerns.

The immediate reaction of consumers was to retrench. Credit card usage dropped off dramatically. So did demand for loans to buy autos, furniture, appliances, other credit-sensitive durable goods. In some cases consumers were merely confused about the program and what they should—or should not—do under it. In other cases consumers, in their bewilderment over the hastily fabricated decrees, apparently stopped using credit almost as a patriotic gesture.

Consumer debt, as a consequence, nosedived. Installment credit *contracted* at a seasonally adjusted 7.5% annual rate in April and 13% in both May and June. By the end of June, the monthly volume of new credit extended was 28% below the peak in September 1979. All told, the second quarter decline in outstanding consumer debt amounted to almost $9 billion—the largest drop (in percentage as well as dollar terms) since World War II years. Indeed, as the chart on page 4 makes clear, the Fed's March 14 action ushered in a phase of extreme abnormality in consumer credit whose disruptive consequences for the whole economy might easily have been much more traumatic then they were.

As for business credit, a major aim was to limit its expansion and to provide that, within a reduced volume of total credit, certain borrowers (particularly farmers, home buyers, small businesses) would have preferred access to loans. For lenders, there were no penalties or inducements to accommodate those borrowers who were to be favored. Banks were simply admonished to make such loans.

SCRP HIGHLIGHTS

THE Fed's March 14 controls program contained these key elements:

- Banks were advised to hold loan growth within the 6% to 9% range previously targeted for total bank credit by the Fed.
- Banks were also encouraged to hold back on lending considered to be nonproductive, inflationary, or of low social priority. Included were unsecured consumer lending, financing of corporate takeovers or mergers, and financing of speculative holdings of commodities.
- Lenders were urged to make "special efforts" to maintain credit flows for farmers, home buyers, and small businesses.
- Restraint was advised on certain types of consumer credit, including credit cards, check credit overdraft plans, and unsecured personal loans. The Fed established a special deposit requirement of 15% for all lenders on increases in covered types of credit.
- Marginal reserve requirements were increased from 8% to 10% on the managed liabilities (large time deposits, Eurodollar borrowings, repurchase agreements against U.S. government and federal agency securities) of large banks.
- Restraint on the amount of credit raised by large nonmember banks was sought through a special deposit requirement of 10% on increases in their managed liabilities.
- Rapid expansion of money market mutual funds was to be restrained by a special deposit requirement of 15% on increases in their total assets above the level of March 14.
- To discourage use of the discount window and to speed bank adjustments in response to restraint on bank reserves, a surcharge of 3 percentage points was applied to borrowings by large banks.

Whether such an approach would work is not possible to say on the experience of the initial venture. The reason is that the combination of actions taken in mid-March (conventional fiscal and monetary measures as well as the special controls program) transformed a fragile economic situation into a sharp decline. Demand for bank loans slumped, and it quickly became evident that banks could take care of over-all credit demands within the restraint-program's limits. As a consequence, there was no real test of the allocative features of the Fed's program. And there was no real test, either, of how serious distortions and strains in credit markets would have become under arbitrary quantitative limitations had economic activity not collapsed.

Needed: careful deliberation

The nation's first experience under the Credit Control Act—the shocks and uncertainties it caused—argue more insistently than ever for careful review of that hastily-drawn legislation. It is not generally realized but, amazingly, the Act was never subjected to the scrutiny of Congressional hearings before its enactment. The authority for credit controls was a "rider" on a bill whose main purpose was the extension of Federal powers to set ceilings on the interest rates payable by depository institutions on time deposits. The bill originated in the Senate, where a provision was included for reactivating Federal authority for "voluntary" credit restraints. There were no provisions, whatever, for mandatory credit controls in the Senate bill and, of course, there was no debate on that issue.

Moreover, there was no mention of any form of credit controls—voluntary or otherwise—in the version of the bill on which the House Banking Committee held its hearings. Legislative language providing for standby controls was introduced during hearings in the House Banking Committee on the rate-ceiling bill. Minority members of the Committee argued strongly for extensive hearings on the proposed controls legislation, but to no avail.

The Fed's initial venture into controls appears to have swollen the ranks of those who think that such authority should not exist. Indeed, the Senate voted in July to repeal the Credit Control Act, again through the use of a rider device. A repeal proposal in the House has languished.

If, as seems likely, the House takes no action on the Credit Control Act this year, consideration of repeal deserves high priority for 1981. Clearly, such unprecedented powers should not have been granted without a thorough airing of all views and without a careful weighing of potential costs and benefits.

Economic "Readjustment" in China

The following article was written by Dr. Dwight H. Perkins, Chairman of the Department of Economics and Professor of Modern China Studies at Harvard University.

IT is now almost four years since the death of Mao Zedong and the dramatic changes in Chinese economic policy that followed his death. It is only months since lower U.S. tariffs on imports from China went into effect as a result of Congress's approval of "most favored nation" treatment for that country. While it is too early to have any record on the impact of MFN, we do have sufficient data with which to appraise China's over-all economic performance since the end of 1976 as well as the implications of that performance for China's economic relations with other countries—the United States in particular.

Much discussion in and out of China would leave the uninitiated observer with the impression that the "gang of four"—highly placed leaders who gave political objectives precedence over economic growth—had brought China's economy to a halt for over a decade, leaving the country little better off than in the early years of Communist rule in the 1950s. Such a conclusion would be far off the mark. Despite the disruptions of the Great Leap Forward (1958-60) and the Cultural Revolution (1966-69),* Chinese industry achieved substantial progress during the 1957-77 period, growing at an average rate of 9% per year. By 1977 per-capita Chinese production of key industrial products was still low, but in absolute terms China had reached a level of output comparable to that of Japan in the early to mid 1960s.

Agriculture did not fare as well as industry in the 1957-77 period. Grain output over these two decades grew at just over 2% a year, or at about the same rate as the rise in population. Per-capita grain production and consumption in the mid 1970s, therefore, were exactly where they were in the mid 1950s. No one was starving but neither had the food component of the standard of living improved significantly. Meat, for example, was still a rarity, and cooking oil, cotton cloth, and grain were still rationed.

Policy changes after Mao

Thus the leaders restored to power in late 1976 inherited a substantial industrial sector, albeit one riddled with problems, and a lagging agricultural sector. Those leaders—who have given priority to economic growth and the "modernization" of China—were headed by Deng Xiaoping. Deng, however, was not formally rehabilitated (for the second time) until 1977, and the position of many other senior leaders was not restored until much later. Moreover, several remaining members of the ruling Politburo had had a close association with the Cultural Revolution radicals. The original "gang of four" was purged within a month of Mao's death but what is sometimes called the "little gang of four"—leaders with ties to the originals—was not removed from the center of power until three years later. Thus the period from late 1976 well into 1979 was one of

*The Great Leap Forward represented Mao's attempt to spur economic growth by means of mass participation in labor-intensive projects. Often characterized as "making steel in backyard furnaces," the venture was ill-conceived and unsuccessful. The Cultural Revolution, instigated by Mao and carried out under the direction of the "gang of four," was aimed at combatting bureaucratic privilege and establishing a more egalitarian society. Economic growth was deliberately sacrificed for egalitarianism, but the revolution got out of hand and public discipline broke down. The army was eventually brought in to restore order.

political consolidation—which to some degree had to precede a new economic strategy.

The so-called readjustment of economic policy announced in 1979, therefore, was the first fully worked out economic plan of the post-Mao leadership. Earlier, in 1977 and 1978, economic planners had devoted their main efforts to getting the economy, particularly industry, moving again after the political and natural (the Tangshan earthquake) disruptions of 1976. Perhaps the most dramatic change in policy was the shift in 1977 in the official attitude toward imports of foreign technology. Whereas before 1977 planners who recommended importing Western or Japanese technology opened themselves to severe criticism, the purge of the Cultural Revolution group removed such political constraints.

This change in attitude at the top brought a dramatic response. Foreign observers have estimated that at one point Chinese enterprises had signed letters of intent or otherwise indicated a desire to buy foreign equipment and services totaling the equivalent of U.S. $600 billion. For a nation with annual exports of under U.S. $10 billion (equivalent) in both 1977 and 1978, such a huge quantity of imports was out of the question. It thus quickly became apparent that the over-ambitious plans of individual enterprises had to be brought into line with reality.

The 1979 readjustment

Meanwhile, actual economic performance in 1977 and 1978 was quite satisfactory. Industrial growth averaged 14% a year over the two-year period. Agriculture, although stagnating in 1977 at the 1975-76 level, experienced an excellent harvest and an unusually high growth rate of 8.9% in 1978. Some of this increase reflected a recovery from the depressed conditions of 1976 and the advent of good weather, but the pace of recovery and renewed agricultural growth was nevertheless impressive.

Despite the rapid growth pace of the first post-Mao years, China's policymakers began in late 1978 and early 1979 to see their economic problems in a new and more sophisticated light. Whereas the heart of the long-term plan drawn up in 1977 had been an approximate doubling of steel output to a target of 60 million tons by 1985, planners subsequently realized that key bottlenecks lay elsewhere. Electric power was in short supply throughout much of the country. Expansion of foreign trade was clogging the ports, which could not handle containers or other modern methods of loading and unloading cargo. The domestic transport system was also straining at the limits of capacity. Finally, even if foreign exchange had been available to import equipment for the contemplated expansion of steel capacity, it was doubtful that domestic production of iron ore and other raw material inputs would expand fast enough to meet the increased demand.

To overcome these bottlenecks, the government made a number of key changes in industrial policy in 1979. The steel target, for example, was cut by 25% to 45 million tons and plans for investment in new steel capacity were curtailed. Thermoelectric plants fueled by oil were reconverted to coal, in order to save petroleum for higher priority uses. To deal with the longer-term fuel shortage, the Chinese signed contracts with international oil companies for offshore exploration. Too, arrangements were made with Japanese firms to expand and modernize China's port facilities and rail lines.

With the productivity of Chinese workers at an unsatisfactory level, labor policies were also recognized as needing readjustment. As one of their first acts in 1977, China's new leaders restored various material incentives that had been

in force in much of the 1950s and early 1960s—including bonuses, piece-work wages, and regular promotions based on skill and effort. They also carried out general wage increases for a large part of the urban labor force in 1977, 1978, and 1979. This was in marked contrast to previous practice, under which "real" urban wages had not risen at all since 1957. Frozen wages and politics in command in the factories, it was widely believed, were major reasons for the low level of productivity and the poor state of worker discipline in general. Labor productivity also has been a problem in China's rural areas. To spur productivity on farms, prices paid for agricultural products bought by the state were raised in 1979 and restrictions on rural free markets—i.e., the private raising and marketing of crops—relaxed.

For wage increases and other incentives to have any meaning, however, workers had to be able to buy desired items with their higher incomes. Food, as noted, was in short supply so that increased demand could not be met without a rise in prices. Industrial output of consumer goods, moreover, had for years been starved of both investment funds and raw-material inputs. A major feature of the 1979 readjustment, therefore, was a shift in resources to the consumer goods sector.

Although investment in the manufacture of consumer goods rose only from 5.4% to 5.8% of the state investment budget, the increase in electric power and raw materials allocated to consumer goods production was more substantial. As a result, output of television sets—a "luxury" item—more than doubled in 1979 and that of bicycles, sewing machines, wrist watches, and cameras rose by some 18% to 33%.

Increased production of consumer goods, however, has not quite kept up with the rising demand for such items induced by higher wages and farm purchase prices. Thus for the first time since 1950 China has had a modest problem with inflation. The GNP deflator rose by 6.9% in 1979, up from 2.2% in 1978.

In the agricultural field, state investment was stepped up to 14% of the national total in 1979 from around 10% in earlier years. Also, the major increases in farm-product purchase prices mentioned earlier were achieved without comparable rises in urban sales prices, with the difference made up by government subsidies. Further, besides relaxing controls on rural free markets, production teams were given increased

China's Imports in 1978

(Million U.S. dollars)

	Total	*Japan*	*West Germany*	*United States*
Total	11,128	3,074	995	865
Foodstuffs	1,320	—	6	409
Grain	935	—	—	291*
Crude materials	1,735	80	19	263
Natural textile fibers	665	—	—	157*
Chemicals	1,125	423	151	60
Manufactures	6,095	2,552	813	132
Iron and steel	2,885	1,850	773	2
Transport equipment	895	176**	31**	10**
Nonelectric machinery	750	262	120	8
Statistical discrepancy***	853	—	—	—

*U.S. figures are for wheat and cotton only.

**Figures include only truck imports.

***The discrepancy is due mainly to the fact that the import total is c.i.f. while the commodity and country data are f.o.b.

SOURCE: Central Intelligence Agency.

freedom in deciding what kinds of crops to grow.

The basic problem with agriculture is that the longer-term growth rate of farm output has kept just ahead of population growth. Many current Chinese leaders feel that lagging production has resulted mainly from poor farm management and inadequate incentives. This view, however, tends to forget that China is trying to feed nearly one billion people on only 250 million acres of land, much of which is arid. The U.S., in contrast, with 400 million acres of high quality arable land, feeds just over 200 million Americans as well as tens of millions of people in other countries. It is this underlying difference in endowment that explains why the U.S. exports grain while China imports it. Even so, China's farm output increased 8.6% in 1979.

No data are yet available on farm output this year. But the State Statistical Bureau has reported that in the first five months of 1980 total industrial production was some 14% higher than during the same period in 1979. Light industry's output increased at a more rapid rate of 23%, with production of television sets and radios up 110%.

The changes in policy brought about by the 1979 readjustment, which is scheduled to run through 1981, have been profound. Given a continuation of the present leadership, some of the changes—such as the greater emphasis on agricultural production—are likely to remain in force well beyond 1981. The de-emphasis on steel, however, will last only so long as steel itself does not become a bottleneck to economic growth. Among the policies introduced by the post-Mao leadership that are most vulnerable to sudden change in the future are those involving foreign participation in China's development effort. To understand what is at issue, it is necessary to take a closer look at that country's foreign exchange situation.

China's Foreign Trade, 1970-79

	Exports	*Imports*	*Exports (f.o.b.)*	*Imports (c.i.f.)*
	(million yuan)		*(million U.S. dollars)*	
1970	n.a.	n.a.	2,156	2,212
1975	n.a.	n.a.	7,122	7,399
1976	n.a.	n.a.	7,265	6,033
1977	13,970	13,280	8,077	7,125
1978	16,760	18,740	9,967	11,128
1979 plan	19,200	24,800	—	—
1979	21,200	24,300	13,504	16,013

n.a. Data not available.

SOURCES: The yuan figures are from China's State Statistical Bureau. The dollar figures are estimates reconstructed by the Central Intelligence Agency from data published by China's trading partners.

The foreign exchange problem

Until recent years, China's imports were confined to a limited range of high-technology items, raw materials not produced in quantity in China (e.g., rubber, long-staple cotton), wheat, and key industrial items needed to augment domestic production (e.g., plate steel, chemical fertilizers). Under those conditions, China's traditional exports—including foods (such as meat, fish, fruit, vegetables, rice), cotton textiles, and other consumer items ranging from fireworks to handicrafts—earned enough foreign exchange to meet the import bill. The nation's leaders could assert a general principle that as a condition of full sovereignty it was necessary to avoid borrowing abroad to finance imports, while only occasionally needing to cover short-term deficits with various euphemisms for credit such as "deferred payments."

However, with the renewed development drive spurring demand for foreign capital goods and raw materials, China's imports (in local-currency terms) soared by 40% in 1978 and

then rose another 30% in 1979 (table on page 10). Because traditional exports were not adequate to sustain such rates of import growth, officials abandoned the policy of prohibiting significant long-term borrowing abroad. By the middle of 1979, often as part of trade agreements with Japan and Western European nations, China acquired lines of credit totaling over U.S. $20 billion, usually at government-subsidized interest rates.

It soon became apparent that—despite the credit lines acquired—China's borrowing plans were much more modest than some observers had anticipated. The revised 1979 plan (published in June of that year) called for a trade deficit of Y 5.6 billion, of which about Y 4 billion was to be covered by foreign credits (Y 1.55 = $1.00 in 1979). Owing to an above-plan rise in exports and a cutback in imports, however, the actual 1979 trade deficit was only Y 3.1 billion (about U.S. $2 billion to $2.5 billion depending on whether yuan or dollar figures are used). Most of this deficit was covered by official borrowing at subsidized interest rates. China's admission as a member of the International Monetary Fund and the World Bank probably means that future deficits as well will be covered mainly by borrowing from official sources rather than from commercial banks.

Rather than relying heavily on credits, Chinese planners have focused on increasing export earnings to cover their foreign exchange gap. This will be a challenging task.

In the mid 1970s, with domestic oil production approaching 2 million barrels a day and OPEC keeping prices high, there were hopes that increased petroleum exports would be the answer. China, however, had an energy shortage of its own, caused in part by difficulties in raising coal output, and most of the oil taken out of the ground had to be used at home. It subsequently became apparent that further increases in output from existing onshore fields would be modest and that further exploration was needed. China (as noted) has signed agreements with major oil companies for exploration offshore. But hopes for rapid increases in foreign exchange earnings from petroleum exports are no longer considered realistic.

Traditionally, China's largest exports have been foodstuffs (table on page 12). Such exports, however, cannot be expanded rapidly without cutting into domestic consumption at a time when planners are attempting to raise domestic food supplies so as to improve incentives. Increased exports of cotton textiles also would cut deeply into short domestic supplies. In an attempt to break this bottleneck, Chinese planners have expanded imports of both cotton and synthetic fibers with a view to raising textile output. However, quotas on textile imports into the United States and other industrial nations limit China's ability to solve its foreign exchange problem by means of increased textile exports. Crude materials, from ores to oilseeds, similarly offer little potential as a source of rapid long-term export growth because most such items are in short supply at home.

That leaves exports of manufactures that do not require domestic agricultural inputs as the main solution to the foreign exchange problem. There is little doubt that China can acquire the capacity to manufacture goods that rely heavily on skilled, low-wage labor, such as in the field of electronics. The main question is whether Chinese enterprises—which are accustomed to producing for a captive, low-income market—can produce competitively for markets in nations where rapidly changing style and quality considerations dominate.

Recognizing the need for outside assistance in penetrating foreign markets, officials have

brought in Hong Kong entrepreneurs to help Chinese enterprises regear for exports. Moreover, a main purpose of the joint venture law enacted in July 1979 presumably is to encourage firms from other countries to help out in this effort. That law, however, is vague on numerous questions of concern to foreign investors; these remain to be settled by related legislation in such areas as company and tax law.

Although U.S. and other foreign companies have been exploring joint ventures with the Chinese, relatively few deals have as yet been concluded. Among those to receive final approval are two proposals, by a U.S. firm and a Hong Kong firm, to build hotels in China. That country is promoting tourism as another way of earning foreign exchange—though, significantly, there is still considerable political sensitivity about this approach. Many Chinese leaders are unhappy about the prospect of building luxury hotels and other facilities to cater to the needs of upper middle class Westerners.

The precise shape that foreign involvement in China's economy will take is only beginning to be worked out. But it is clear that China will welcome foreign participation only in those sectors of the economy that need help to break into foreign markets or that depend on imported technology.

China's Exports

(Million U.S. dollars)

	1970	*1975*	*1977*	*1978*
Total exports	2,156	7,122	8,077	9,967
Foodstuffs	645	2,125	1,960	2,225
Crude materials	430	1,035	1,045	1,325
Petroleum and petroleum products	4	910	1,020	1,220
Textiles and clothing	495	1,410	1,835	2,420
Other manufactures	360	1,630	2,205	2,665
Statistical discrepancy*	222	12	12	112

*The discrepancy is due mainly to the fact that the export totals and the commodity breakdowns are from different CIA publications with minor differences in coverage.

SOURCE: Central Intelligence Agency.

U.S.–China trade

With the opening of the Chinese economy, U.S. trade with China has grown rapidly in recent years—from U.S. $374 million in 1977 to approximately U.S. $2.3 billion in 1979. The growth has resulted mainly from an expansion of China's agricultural imports from the U.S. —in particular grain and cotton. China's exports to this country have remained relatively small —estimated at U.S. $592 million in 1979.

Waiting approval is an agreement which will enable China to sizably step up exports of textiles and apparel to the U.S. under quotas for a three-year period beginning the first of this year. In other areas, success in expanding exports to this country will depend on whether Chinese manufacturers develop the ability to compete in markets for other items now dominated by developing nations such as Korea. Sales of petroleum products to the U.S. will remain minuscule.

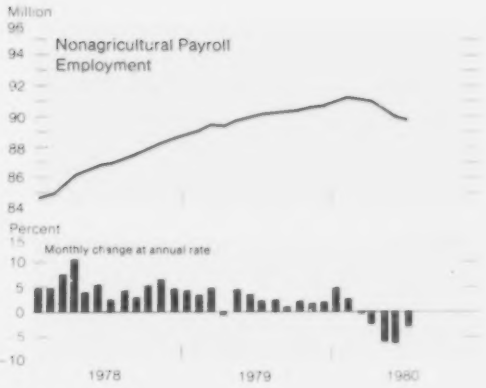
China's efforts to expand textile exports will continue to provide a large market for American cotton. And its incentive-improvement program probably will keep grain imports from the U.S. at a fairly high level. As for other potential U.S. export opportunities, results will depend on the competitiveness of individual firms.

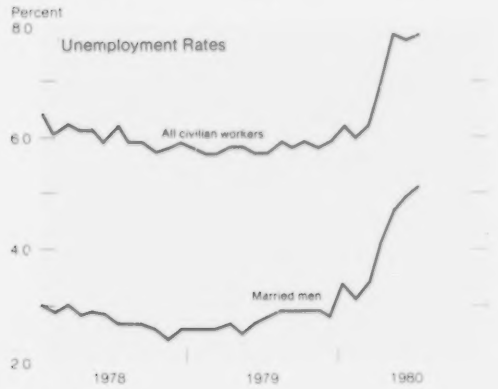
Significantly, however, the competitive posi-

tion of U.S. exporters is now greatly improved over any time in the past. As is indicated in the table on page 9, the United States has lagged far behind Japan and West Germany in supplying China with manufactured goods. Prior to normalization of diplomatic relations, U.S. exporters were treated as residual suppliers. China turned to non-U.S. firms whenever they could supply items on roughly comparable terms. With normalization and the recent granting of MFN to China, that country's need to maintain political pressure on the U.S. government by treating American exporters in this way was largely removed. This is a potentially important plus. If the U.S. $2 billion in Export-Import Bank financing promised by Vice President Mondale during his August 1979 trip to China becomes a reality, that will improve the prospects of American exporters even further.

Over the long term, of course, prospects for U.S. trade with China—as indeed for other countries' trade as well—will depend on whether the priority now given to economic growth by China's leaders continues. For the moment that priority appears to enjoy wide support. Whether the emphasis on development will outlast the current leadership, even that leadership does not know.

ECONOMIC INDICATORS





NOTE: Latest plotting in each chart is for the month of July. All data are seasonally adjusted. Average hourly earnings are adjusted for overtime hours in manufacturing and for inter-industry employment shifts.

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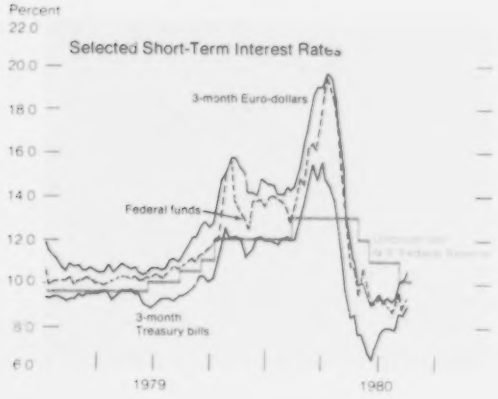
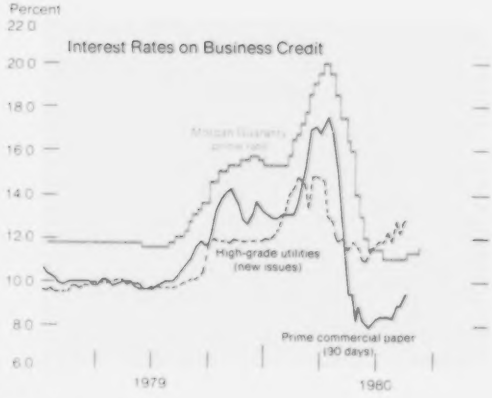
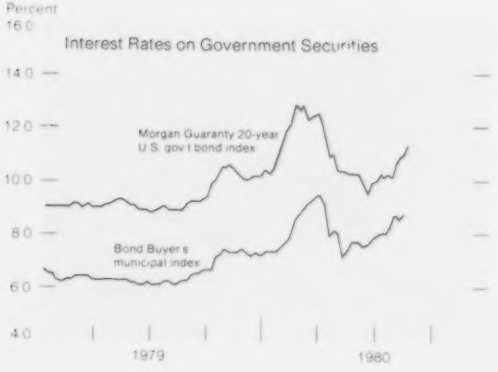
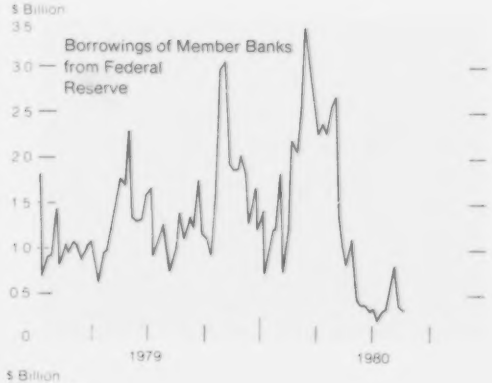
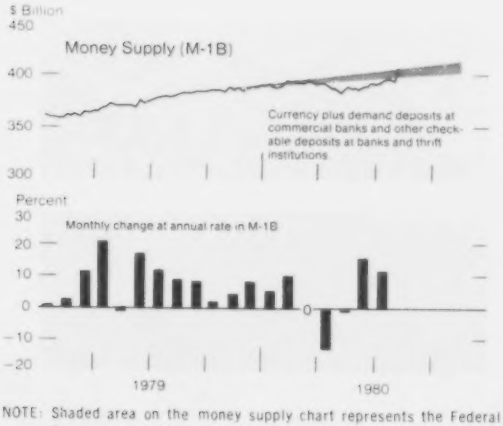
MONETARY INDICATORS

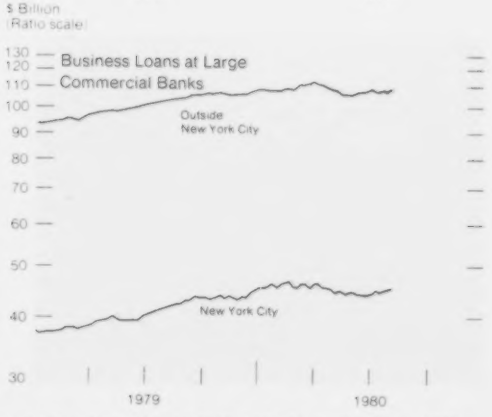









$ Billion
Money Supply (M-1B)
Currency plus demand deposits at commercial banks and other checkable deposits at banks and thrift institutions.
Percent
Monthly change at annual rate in M-1B
1979
1980



NOTE: Shaded area on the money supply chart represents the Federal Reserve growth target for the period from the fourth quarter 1979 to fourth quarter 1980. Business loans are net of bankers' acceptances and of commercial paper held by banks. All data except interest rates and member bank borrowings are seasonally adjusted.

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The Recovery: Can It Be Sustained?

THE economy is entering the final quarter of the year with upward momentum. Latest data on production, sales, and employment indicate that a turnaround got under way in the third quarter, with "real" GNP rising at something above a 1% annual rate. If final figures confirm that modest growth, the 1980 recession will have been the shortest in business-cycle history.

War between Iran and Iraq, assuming it does not drag on or engulf other Middle East countries, does not seem likely at this point to alter materially the pattern of U.S. economic recovery. Oil inventories are considerably above normal and that should work to limit price increases and prevent shortages. That's important to the auto industry at a time when it is bringing out its new models. With limited capability to produce 4-cylinder models (probably no more than 3 million in the 1981 model year), the improvement during the summer months in sales of medium- and full-size cars needs to continue if Detroit is to realize its hopes for total auto sales of 7.5 million or thereabouts in 1981. The fact that gasoline supplies are relatively ample now is a helpful conditioning factor.

But while the threat to budding cyclical recovery from the Iran-Iraq conflict does not seem large at the moment, doubts about the durability of the upswing are beginning to surface for other reasons. Chief among these is the increasingly restrictive stance of Federal Reserve policy—as signalled by the sharp climb of interest rates over the last several months. As of early October, short-term interest rates were up in some instances more than four full percentage points from their recession lows of last spring, while

long-term rates were up between two and three percentage points. This is an unprecedented climb so near a cyclical bottoming of the economy. And it dramatically underscores the fact that the Federal Reserve's customary posture for this stage of the cycle—one of trying to nurture recovery by keeping interest rates down—is not being repeated.

The Fed's atypical policy stance obviously raises the question of whether activities that are heavily credit-dependent can proceed with enough vigor at current levels of interest rates to keep general cyclical recovery going. Housing activity is a prime focus of concern—inevitably so as mortgage rates have pushed back to the 13%-14% level that triggered buyer resistance earlier this year. And increasing worry is being voiced by the auto industry about the ability of auto dealers to cope with the mounting costs of financing showroom inventories.

What especially worries many analysts is that there can be no certainty of a movement back toward lower interest rates any time soon. This is partly because the key monetary aggregates remain in the vicinity of the upper boundaries of the target ranges set by the Fed. That implies the possibility of continued caution by the Fed for quite some time in supplying bank reserves. Moreover, an even less accommodative monetary environment could well be ahead for 1981. This is so since the Fed—under Congressional pressure to specify its money-growth target objectives for next year—has tentatively indicated that the upper boundaries of growth for all aggregates are to be lowered by one half a percentage point for 1981. If the Fed in fact pursues that objective with determination, the possibility certainly exists that there may not be sufficient means of financing in the economy to accommodate even sluggish recovery.

That issue is perhaps best examined by looking at Fed intentions with respect to M_2, a fairly broad measure of money—since narrower measures are likely to be buffeted about next year by regulatory change, most importantly the scheduled start on January 1 of nation-wide NOW accounts. For M_2 (which encompasses transactions balances as well as many interest-bearing alternatives to cash), the Fed has tentatively set 8½% as the upper boundary for growth in 1981. That targeted increase certainly does not look very large considering that there are few signs that inflation will run any lower than that next year.

To be sure, an 8½% "cap" on M_2 growth would not automatically set an 8½% limit on the rise in the dollar total of GNP, since money has a "second dimension"—its so-called velocity, or the rapidity with which it is used. If velocity, or the efficiency of money, were to increase fast enough, even a modest rate of money growth could finance a rapid pace of economic activity.

An increase of several percentage points in M_2 velocity next year certainly is within the

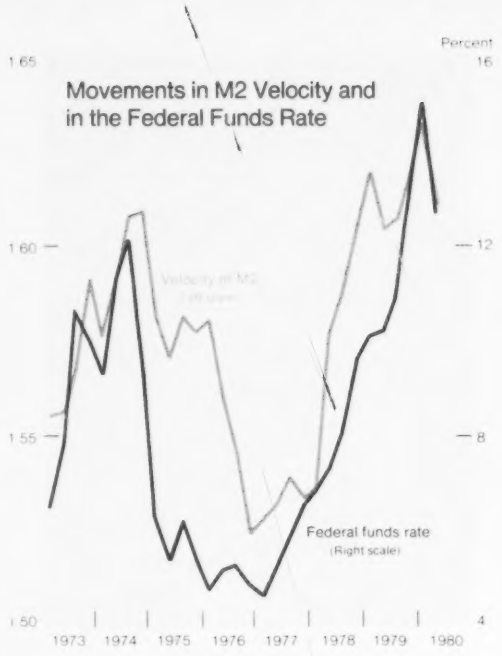
The Sharp Climb in Interest Rates

	Mid June	*Start of October*	*Change in basis points*
Federal funds	9.68	13.00	+332
Three-month Treasury bills	6.44	11.44	+500
Prime commercial paper	8.03	12.88	+485
Morgan Guaranty "prime rate"	12.00	13.50	+150
Long-term Treasury bonds	9.64	11.74	+210
New Aa utility bonds	10.88	14.00	+312

realm of possibility. To be sure, over the past twenty years as a whole, M_2 velocity has shown no trend growth. But, as the accompanying chart shows, it has exhibited substantial short-run variability. Significantly, however, as the chart also shows, that variability has tended to be closely correlated with variations in interest rates. M_2 velocity tends to rise, that is, as interest rates go up and to fall as interest rates come down. That suggests that a rise of several percentage points in M_2 velocity next year—sufficient to accommodate modest real growth in the economy—might be associated with continued upward pressure on interest rates.

But is it realistic to expect that such an interest-rate environment would be consistent with a continuing economic recovery? That question cannot be answered without qualification. The economy did in fact continue to grow for a number of months in late 1979 in spite of money-market rates as high as those that now prevail, but growth then was certainly not ebullient and it was achieved only because the personal saving rate fell to an exceptionally low level. The presumption must be that in housing and, indeed, widely in all activities that are heavily credit-dependent, the interest rate levels now prevailing will prove a troublesome hurdle to continuing growth. The worrisome "double dip" possibility, as a consequence, is clearly growing.

A significant early reduction in inflation would, of course, brighten the outlook for 1981 considerably since, with less inflation, a given amount of money would be able to finance more real growth. The hard reality, however, is that



inflation is proving exceedingly obdurate. The evidence, indeed, increasingly suggests that the economy's whole price-and-wage structure has become progressively less flexible in recent decades and that, consequently, anti-inflation actions (monetary or otherwise) yield results very slowly. Whether the public and elected officials will have the patience to wait out slow-working Fed policies—if those policies permit only modest growth and little progress in reducing unemployment—is far from certain. This is emphasized by the increasing attention that rising interest rates have been receiving in the political campaign.

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Productivity Cloud Has a Silver Lining

The following article was written by Geoffrey H. Moore, Director, Center for International Business Cycle Research, Rutgers University.

WITH all the hue and cry, most of it justified, about this country's declining productivity, little attention has been paid to a concomitant development that so far has offset some of the damage. The number of persons employed has been rising relative to the population, at least until the start of the current recession. Last autumn the percentage of the population that was employed reached the highest level ever recorded. The recession has brought the figure down, but it is still well above the level reached at the peak of the preceding business cycle in 1973, or any peak before that.

This development carries with it two implications regarding productivity. One is that the rise in the percentage employed has changed the characteristics of the work force. Many more women and young people are now employed, and on the whole they are less experienced than their colleagues. Sometimes they are occupying jobs where little experience is needed, but by the same token these are jobs where productivity, as measured by the marketplace, is relatively low. As a result, the rise in the percentage employed has tended to reduce the average level of productivity per person employed.

Widgets per capita

The second implication is that the increase in the percentage employed, despite its retarding effect on the average level of output per worker, has nevertheless increased total output, and especially output per capita. To see how this can happen, take a simple example. Suppose, for instance, that 50 persons out of a total population of 100 are employed and that they produce 10 widgets each for a total production of 500 widgets, which is 5 per capita. Now assume that 60 persons are employed and the 10 newcomers produce only 7 widgets each. Productivity per person employed has dropped to 9.5 widgets, but total output is 570 and output per capita is 5.7. The population as a whole is enjoying more widgets per person despite the decline in productivity.

That this is not an entirely fanciful example is illustrated in the accompanying table, which compares the situation at the peak of the last business cycle, in 1973, with that at the peak of the current cycle, in 1979. While the population was increasing by 5%, the number of persons employed in civilian jobs increased 15%. Whereas output per person employed advanced only 1%, output per capita advanced 10%. The slow growth in productivity (output per person employed) was offset by the rapid growth in the number employed.

OUTPUT, POPULATION, AND EMPLOYMENT, 1973-1979

	GNP in 1979 $ (bil.)	*Population (mil.)*	*Civilian employment (mil.)*	*GNP per person employed 1979 $*	*GNP per capita 1979 $*
1973	2,044	210.4	84.4	24,200	9,700
1979	2,369	220.6	96.9	24,500	10,700
Percent change	15.9	4.8	14.8	1.2	10.3

How does the recent trend compare with earlier years, when employment was increasing

less rapidly but productivity was increasing more rapidly? If we divide the period since 1948 into roughly three equal parts but measure changes between business cycle peak years to avoid the effect of recessions, the results turn out as follows:

	Percentage increase per year		
	1948-57	*1957-69*	*1969-79*
Real GNP	3.8	3.9	2.9
Population	1.8	1.4	0.9
Employment	1.0	1.6	2.2
GNP per person employed	2.7	2.2	0.6
GNP per capita	2.0	2.5	2.0

We see here a drastic reduction in productivity growth: in the past decade the growth rate in GNP per person employed has dropped to about a fifth of what it was in the 1948-57 period. We see also the great acceleration in employment growth, together with declining population growth. And finally we see that output per capita has grown as fast in the last decade as it did in 1948-57 and only a bit more slowly than in 1957-69.

This is a hopeful result, especially because we can be sure that as the newcomers in the work force become more experienced and better trained they will become more productive. But it does not mean that we can be any less concerned about efforts to stimulate productivity. The shift in the composition of the work force is not the only factor that has slowed productivity, and the other factors, such as those which retard capital investment and handicap innovative enterprise, can become dominant in the long run. These problems must be addressed promptly if we are to continue to avoid the unhappy consequences that would come from a reduction in both output per worker and output per capita.

The Changing U.S. Energy Outlook

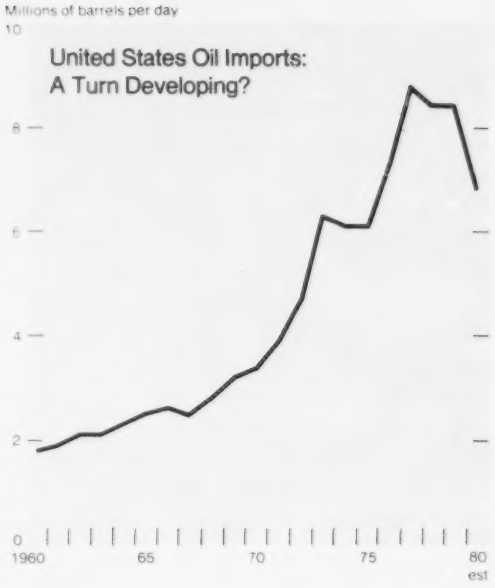
THIS country's oil imports in 1980 are likely to average 7 million barrels per day (bpd), or less, on the basis of data for the first nine months of the year. That would be 16% below the import average last year and 20% below the peak rate of 1977.

Some of this year's decline in oil imports is of course related to the recession and to mild weather last winter. However, such factors do not fully explain the turn to lessened dependence on foreign oil. Rather, U.S. output of energy—particularly of coal and natural gas, but also of oil—has increased this year. At the same time, both households and businesses have continued conservation efforts in response to the massive oil-price increases of the last two years. Not only will aggregate energy consumption be down from 1979 to 1980, probably by about 3%; but, even more significant, energy use per unit of output (a measure that abstracts from the influence of the recession) also will be down.

These favorable production and consumption developments do not mean that the United States has any cause for complacency. This country will continue to have large oil-import needs for years to come. And the United States and its European and Japanese allies remain alarmingly vulnerable (as is now being emphasized anew by the hostilities between Iran

and Iraq) to oil-price increases and to disruption of foreign oil supplies. But it is at least possible, judging by underlying production and consumption trends, that a change for the better has occurred for the U.S.—one that could bring diminishing dependence on oil imports over the next half decade instead of the growing dependence that characterized most of the 1970s (chart on this page).

Whether improvement will be large or small, however, is certainly not easy to gauge. Even when experts make similar assumptions about such underlying influences as rates of economic growth in the U.S. and future oil-price increases, they often differ considerably in their judgments as to what the next few years will bring. Just how wide the range of judgment is—and how great the uncertainties—is evident from a review of estimates for energy output and energy demand over the next half decade.



Production

Oil. The currently prevailing view is that, despite an uptick in U.S. oil output this year, the trend is still downward—as it has been since the early 1970s. The basic reason for this view is that most of the major oil fields in the "Lower 48" states have been in production for some time and are in an advanced stage of natural decline. To be sure, there has been a large increase in drilling activity in recent years, which has speeded up takings from existing fields. But proven crude-oil reserves in the Lower 48 have continued to slip. And, unless new deposits are found, more intense drilling is unlikely to lead to sustained improvement in production.

It is expected, however, that enhanced recovery methods will be stimulated by the sharply higher oil prices of recent years, and that some of the anticipated drop in production in the Lower 48 will be offset by increased output from Alaska's North Slope. In general, estimates of petroleum production (crude oil, condensate, and natural-gas liquids) tend to range from 8.5 million to 9.5 million bpd in 1985, down from 10.1 million bpd in 1979. These estimates would translate into domestic oil supplies in the range of 18 quadrillion to 20 quadrillion British thermal units* or "quads" (table on page 7).

Natural gas. While there is broad agreement that U.S. petroleum production is likely to continue to decline, no consensus exists as to the outlook for supplies of natural gas—either domestic or imported. Some analysts have concluded that, here too, the trend for domestic output is still downward, largely because additions to reserves continue to fall below production—despite sharply stepped-up drilling activity

*The British thermal unit (BTU) is the standard measure of energy consumption that reflects the heat value of various primary energy sources. One BTU represents the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at or near 39°F.

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in an improved pricing environment. Some pessimists about gas supplies also tend to think they will be "demand limited." This reflects concern that industrial firms will view natural gas as a relatively risky fuel choice in view of the history of government's on-again, off-again attitude toward use of gas by industry. At present, the Department of Energy (DOE) is encouraging both industrial firms and utilities to use natural gas—since supplies have been ample in the past year or so. But there is no certainty about how long the current policy will last. It was only a short time ago that the government—under legislation enacted in 1978 after several years of extremely tight supply conditions—required high volume users of natural gas (and of oil as well) to switch to coal by 1990. A major question is whether such a mandate will once again circumscribe the fuel choices of industrial firms.

In addition, skeptics about the likelihood of a significant rise in natural-gas supplies emphasize that, if gas imports are to be enlarged appreciably, very complex arrangements governing quantity and price levels must be worked out between the United States and foreign suppliers—particularly Canada and Mexico. Suggestive of the major obstacles to enlarged gas imports is that DOE in its 1979 report to Congress projected zero natural-gas imports from both Canada and Mexico for 1985 because of a prospective gap between U.S. and international gas prices so large as to suggest that international gas simply will not be competitive in U.S. markets.

Not everyone, however, is pessimistic about mid-decade gas supplies. Some analysts assume that import obstacles will be overcome—both because of the compelling U.S. need for gas imports and because of the surplus supplies that, it is said, are likely to exist in both Canada and Mexico. More optimistic analysts also tend to think that the demand-limitation problem could be overcome with time if the present policy of allowing industrial firms to use natural gas were followed consistently over a period of years. Moreover, those taking a more sanguine view of future gas supplies see reason for encouragement in the turnaround in domestic gas production that followed 1978 gas-pricing legislation. That legislation increased the controlled price of interstate gas from its formerly extremely low level. And it integrated the interstate and intrastate gas markets by establishing uniform controls, thus eliminating the previous disincentive for producers to provide natural gas to the interstate market. In addition, the act provided for price decontrol, effective in 1985, of "new" gas (i.e., gas from wells drilled after February 1977) and for immediate decontrol of limited amounts of gas—most importantly, that produced from wells in excess of 15,000 feet. Since 1978, the previous decline in gas production has been arrested and output has risen an estimated 5%. This is cited as evidence that the potential benefits of higher prices are not being sufficiently taken into account by those who are pessimistic about the outlook for gas supplies.

U.S. Energy Production by Source

(Quadrillion BTU's)

	1973	*1979*	*Range of estimates 1985*	
Total	62.4	63.6	66	78
Petroleum	22.1	20.5	18	20
Natural gas	22.2	19.9	18	22
Coal	14.4	17.4	22	25
Nuclear power	0.9	2.7	5	7
Other	2.9	3.0	3	4

Among the most optimistic of natural-gas forecasts is that of the American Gas Association (AGA). It has estimated that 1985 gas supplies (domestically produced plus imports) will rise to between 22 and 25 quads, up from 21 quads last year. In making that estimate, AGA assumes that constraints on industrial use will be removed permanently. It also counts on a significant rise in imports (to about 3 quads), mainly from Canada and Mexico. Even so, the AGA forecast implies at least a modest rise in domestic production of natural gas.

Low-side projections for gas supplies (domestic and imported), in contrast, tend to cluster around 19 quads—a level that would lead to a significantly greater demand for oil imports by mid decade than would be consistent with the AGA outlook. Indeed, the difference between the relatively pessimistic view for 1985 natural-gas supplies and the middle of the AGA range would amount to as much as 2 million bpd of additional oil imports. Substitution of gas imports for oil imports, to be sure, would not materially improve the U.S. balance-of-payments position. But, from the point of view of security of U.S. energy supply, a relative shift to Canada and Mexico as suppliers would be a plus.

Coal and nuclear power. Uncertainties surrounding the outlook for nuclear power and for coal production, more than 75% of which is used in the production of electricity, are still more complex. Here judgments must reflect not only economic and technical matters and public policy but also possible changes in public attitudes. Coal is both relatively cheap and abundantly available, but suffers the burden of great environmental controversy. Nuclear power, always controversial, has become even more so in the aftermath of Three Mile Island.

Utility companies tend to be relatively optimistic about growth in both coal and nuclear-energy use between now and the middle of the decade. The National Electric Reliability Council (NERC), an association of virtually all the nation's electric utility systems, has estimated that its members will produce about 60% more electricity from coal and nuclear fuel in 1985 than they did in 1979. What makes that estimate especially significant is that it is not based on any massive acceleration of plant construction. Rather, almost all of the new nuclear and coal-fired capacity expected to be in service in 1985 is now under construction—some two thirds of it more than 50% completed in the case of nuclear plants, and about half more than 50% completed in the case of coal-fired plants.

In addition, utilities will continue to convert existing generating stations from oil and natural gas to coal. They are prompted to do so in large part by fuel-cost considerations, since coal is by far the cheapest fossil fuel in many regions of the country. Utilities' switch to coal is also in response to government incentives such as an additional 10% investment tax credit to cover conversion costs and rapid depreciation for early retirement of oil- and gas-fired boilers. The Administration's plan to provide direct subsidies to utilities to switch to coal, if approved by Congress, would provide an added incentive.

Heavily influenced by prospects that electric utilities will be using substantially enlarged quantities of coal in the next few years, specialists agree that U.S. coal production should be appreciably higher in 1985 than it was in 1979 when tonnage producing about 17½ quads was mined. Projections for coal output in 1985 tend to cluster in a range equivalent to between 22 and 25 quads. Not all of that would be available for domestic use, however, since coal exports have been growing and should reach some 3 quads by 1985. Unless environmental regula-

tions become much more stringent than they are, expansion of coal output to the 22-to-25-quad range (4% to 6% per year between 1979 and 1985) should be feasible, particularly since the industry currently is operating substantially below capacity.

The outlook for nuclear power is less clear, partly because of the difficulty of assessing the ultimate consequences of the accident last year at Three Mile Island. Reassuringly, voters in Maine this past month rejected by a wide margin a measure to shut down that state's nuclear power plant and to ban construction of future plants. In several other states, propositions calling for bans on construction are to be put on November ballots or are in the petition stage. And, indeed, even before Three Mile Island, California put a moratorium on construction. Whatever the outcome of November referenda, agitation to limit nuclear power seems certain to persist. Moreover, the technical complexity of nuclear plants, and numerous and time-consuming regulatory approvals during construction, make it difficult to project precisely how rapidly plants under construction will come on stream. Because of such considerations, forecasts for 1985 nuclear output tend to differ, despite agreement that a major increase over 1979 is likely. The range of forecasts for mid decade is pretty well described, however, by the electric utility industry's estimate of 7 quads and DOE's estimate of just over 5 quads.

Output from other sources. Only a small percentage of U.S. energy supplies (roughly 5%, or 3 quads) now comes from sources other than oil, natural gas, coal, and nuclear power. Hydroelectric power is really the only significant "other" energy source. And its prospective growth during the next decade is viewed as limited since most available sites are already in use. While solar-power collectors are appearing with more and more frequency on American rooftops, output of solar power at present is of minor importance. Because of high initial costs, it is likely to remain so for the next few years, despite considerable potential for the longer term.

Consumption

On the consumption side of the energy equation, as on the production side, judgments differ as to what the next few years will bring—with the big question being whether the dramatic energy-saving momentum of the second half of the 1970s can be maintained. Between 1973 and 1979, energy consumption increased only 0.9% a year on average, whereas in the previous twenty years it had grown at a rate of 3.6%. Slower growth in economic activity accounted for some of the reduction in growth of energy use; much more important, however, was an impressive advance—under the prod of mounting prices—in efficiency of energy use. This is evident from the fact that the ratio of energy consumption to "real" GNP declined 9% between 1973 and 1979. That record of economizing ran far ahead of what energy specialists anticipated a few years ago, and it compares favorably with gains in efficiency recorded in other industrial countries (box on page 13).

There are reasons for expecting that the trend toward greater efficiency in energy use will continue, although it will not be easy to duplicate the gains of the 1973-79 period. During that time, energy use rose only three tenths of 1% for each percentage point increase in real GNP, a striking improvement over the normal historical relationship of just about one to one. A key reason why that 0.3 ratio will be hard to match is that many of the easier ways of saving fuel (such as turning down thermostats and reducing highway speed limits) have been ex-

ENERGY USE BY SECTOR

SECTOR-by-sector analysis of prospective energy consumption tends to support estimates of energy use arrived at by "macro" techniques—that is, by estimating growth in real GNP and making assumptions on the production-energy link. Here are the three end-use sectors:

Transportation. New autos sold this year in the U.S. are getting an average of about 19 miles per gallon (mpg), an improvement of about 45% over the average fuel efficiency of cars sold in this country in the mid 1970s. Because it takes five years to replace roughly half of the auto stock, the relatively inefficient cars of the late 1970s—judged by the standards of the early 1980s—still will importantly influence demand for motor fuels at mid decade. Even so, according to estimates made by General Motors, the average efficiency of the U.S. car stock will rise to the range of 18 to 19 mpg by 1985, compared with 14½ mpg in 1979. On the basis of that estimate and assuming a continuing reduction in the number of miles driven per car, total auto fuel consumption at mid decade should be roughly 17% below the level in 1979—despite an increase of about 11% in the number of cars on the road.

To be sure, some of the decline in fuel use by autos is likely to be offset by increased use of fuel in nonauto transportation. General agreement exists that airline transportation—even though it is now in a slump—will be growing as a fuel user in coming years; rail transport is expected to be using increasing amounts of fuel, in no small measure because of the enlarged coal tonnage that the railroads will be handling; and it is anticipated that gains in the average efficiency of trucks are not likely to compensate for increased trucking mileage. Still, with autos now accounting for about 50% of fuel use in transportation, the sector as a whole should show a significant decline in fuel use between 1979 and 1985.

Residential and commercial. Ever since the first oil-price shock of 1974, home owners have been working to cut down fuel costs—with major concentration on reducing the expense of space heating, which accounts for about 60% of the energy used by households. Prior to 1974 only about a million home owners each year had been adding insulation in their attics, but since then some 4 million to 5 million homes each year have been outfitted with attic insulation. In new homes, insulation in attics and walls, which prior to the mid 1970s was used sparingly, has become almost standard. That kind of response, along with the lowering of thermostats, has produced striking results: gas heating requirements per customer per degree day dropped 13% between the early 1970s and 1978 (the latest year for which figures are available), and a similar reduction in consumption was made by home owners who heat with oil.

The potential for further energy savings is significant. Some 25 million single-family houses (roughly half the stock) are still either without any attic insulation or have less than the six inches of protection believed necessary for efficient heating and cooling. The opportunity exploited. Henceforth, economizing is going to have to come much more by the harder route of basic change in methods of doing things—something that in many instances will require new technologies and substantial capital investment. Nevertheless, many energy specialists see the enormous price increases for fuels between 1978 and 1980 (which matched the percentage gains between 1972 and 1974) as providing a powerful fresh incentive to households and businesses to economize on fuel use. Indeed, because the price shock of the past two years was so

ists as well for reducing the space-heating requirements of commercial buildings, where use of insulation materials has grown much more slowly than it has in the residential market.

Estimates of how rapidly energy use will increase during the 1979-85 period in the residential/commercial sector range from fractional increments on a yearly basis to as much as 2%. All analysts agree, however, that growth in the future will not come anywhere near the pre-1973 pace.

Industry. Growth in energy use by the industrial sector is variously estimated from as little as a fraction of a percentage point annually, which would repeat the performance of the 1973-79 period, to 2% per year. Those who expect the latter emphasize that most of the conservation gains in the industrial sector in the recent past were of a "housekeeping" nature, easily achieved and offering little further potential. Those who look on the brighter side stress that it is precisely in the industrial sector where the decision-making process is most sensitive to cost changes and that increases in energy prices during the past two years have sensitized managements to the need to redouble efforts to minimize costs.

In sum, prospective demands in the various energy-using sectors—18 to 19 quads for transportation; 31 to 33 quads for the residential/commercial market; 30 to 33 quads for industry—are not inconsistent with the range for total energy consumption (81 to 85 quads) indicated by macro techniques. In fact, total consumption would be held to slightly below 81 quads if the maximum conservation potential of all sectors is achieved.

large, some energy experts believe it will be possible to do as well in the next half decade in economizing on energy as in the 1973-79 period. Even those who anticipate some slippage over the next few years from the 0.3 ratio between growth of energy demand and of real GNP during the 1973-79 period don't anticipate a return to the historical norm; in general, projections of the ratio range from 0.3 to 0.6.

The lower of these figures, when combined with the commonly made assumption that real GNP in coming years will grow something like 3% per year, would put total energy consumption in the neighborhood of 81 quads by the middle of the decade. The higher figure would put it near 85 quads.* Interestingly, DOE has estimated that 1985 energy consumption will be near the low end of that range—assuming, as most other analysts do, a moderate updrift in coming years in real (inflation adjusted) world oil prices. Only two years ago, when the Department was working with much lower projections for oil prices, its estimate for 1985 energy consumption was 10 quads higher.

Even if energy use is as high as 85 quads in 1985, average annual growth in consumption over the 1979-85 period would amount to only 1.3%—a bit faster than in the 1973-79 period but much slower, by several percentage points, than the historical growth rate. If energy use is only 81 quads in 1985, average annual growth in consumption would work out at 0.5%. Either end of the range of forecasts implies impressive conservation achievements. That implication is supported by the patterns of energy use now evident in individual sectors of the economy (accompanying box).

Implications for oil imports

The foregoing review suggests that U.S. requirements for oil imports in 1985 can vary widely. While views among experts about individual parts of the consumption/production equation for energy are not all that far apart, especially for a time horizon five years ahead,

*Both figures take into account this year's decline in energy consumption of some 3%.

the minor differences, when added up, suggest a very uncertain outcome for oil-import needs as the balancing item (table on this page). The extreme possibilities are illustrated simply by the mechanical exercise of totaling up the best and worst possible outcomes for production—and lining those up against low and high estimates for consumption. If one combines the low estimate for consumption (81 quads) with the high aggregate estimate for production (78 quads), the inference is that oil-import needs as of mid decade would be less than 2 million bpd. Alternatively, if the high estimate for consumption (85 quads) is combined with the low total for production (66 quads) and imports of natural gas, oil-import needs would approximate 10 million bpd.

Of course, it is improbable that all the worst-case, or all the best-case, assumptions will be realized. One reason for thinking that the latter combination will be particularly difficult to achieve is that it implies a massive shift from oil to other energy sources; it is questionable whether substitution to that extent will be feasible. On a probability basis, it would be reasonable to think more in terms of a mid-range outcome—yielding oil imports of something like 6 million bpd, which happens to be very close to what DOE anticipates. While that would represent some improvement over this year's recession-affected level of oil imports, it would still be a long way from anything remotely resembling energy independence.

Clearly, the failure of OPEC last month in Vienna to establish a policy of moderate and orderly price increases in coming years underscores the risk that major importing countries will continue to be jolted from time to time by outsized price increases. A crucial prerequisite to OPEC's ability to move to an orderly pricing formula would seem to be an ability of member countries to agree on production volumes. And such agreement clearly remains very difficult to achieve. Hostilities between Iran and Iraq present a special risk, of course, for the immediate future—with several million bpd of oil production (out of a "normal" total of about 50 million bpd in the noncommunist world) disrupted as of early October. Against that background, unusually large inventories of oil provide little comfort. They could stave off major supply shortages in consuming countries for several months; but, long before such shortages loom, market prices will be bid up dramatically if the fighting drags on.

The prudent course for national policy, in the context of the open-ended character of the outlook, would be to run scared—even while recognizing that there just possibly could be pleasant surprises on both the consumption and production sides along the way. Running scared

The U.S. Energy Equation

(Quadrillion BTUs)

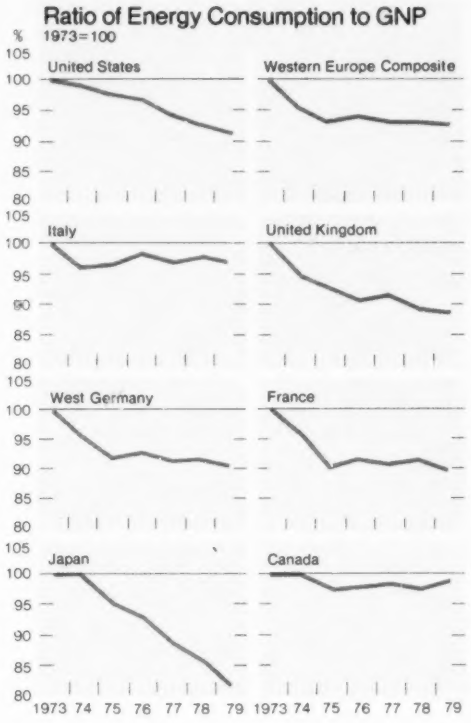
	1973	*1979*	*Range of estimates 1985*	
Consumption	74.6	78.8	85	81
Production	62.4	63.6	66	78
Non-oil foreign trade:				
Natural gas, net imports	1.0	1.2	1	3
Coal (and other), net exports	1.3	1.6	3	3
Balancing item:				
Net oil imports	13.0	16.9	?	
(Million bpd)	6.0	7.9		

NOTE: Net import and production figures for 1973 and 1979 do not add to the consumption total, due to factors such as inventory changes.

ENERGY SAVING: HOW U.S. GAINS COMPARE

DESPITE widespread foreign criticism that the U.S. is an energy wastrel, energy-saving gains in this country generally have been in line with those of other industrial countries. If the ratio of energy consumption to "real" GNP is indexed at a value of 100 for the year 1973, by 1979 the U.S. index had fallen to 91.1—compared with 93 for Western European countries as a group. U.S. conservation efforts have been especially impressive in comparison with Canada's and Italy's, but they compare unfavorably with Japan's. Western European countries reduced their energy intensiveness noticeably in 1974 and 1975 but since then have made little further progress. In the U.S., in contrast, improvement in energy efficiency has been more gradual but more consistent.

To be sure, the U.S. to start with had been a much more energy-intensive nation than Japan or European nations. And its per-capita consumption of energy (adjusted for differences in income) remains some 30% to 40% above levels in those countries. However, a large differential most likely will always exist, because of the predominance of single-family housing in the U.S. and because of its vast size and low population density—factors that make for greater dependence on the automobile.



certainly was not the spirit of energy policy in the latter half of the 1970s—when Congress dawdled over oil- and gas-price decontrol and imposed increasingly exacting standards for environmental quality that impeded the development of this country's most abundant energy resources, coal and nuclear power. The 1980s must be different. The trauma of the oil-price increases of the past two years and the reminder of vulnerability to supply shortages provided by hostilities between Iran and Iraq may have brought about new awareness of the risk of complacency. That awareness, however, is still to be tested.

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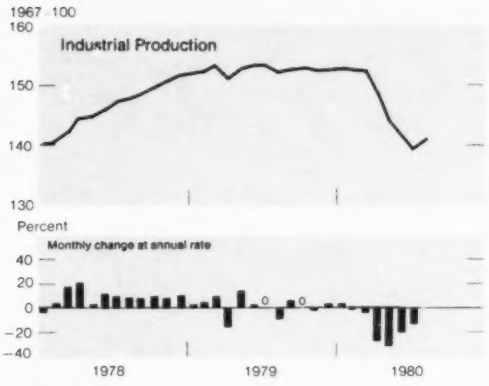
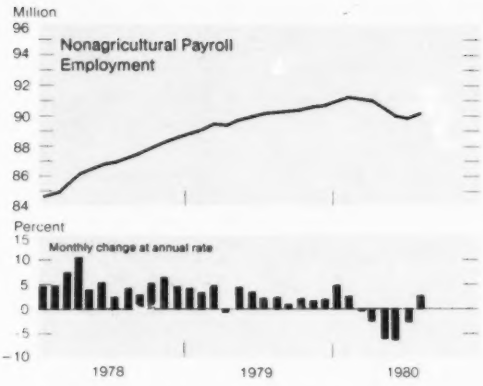
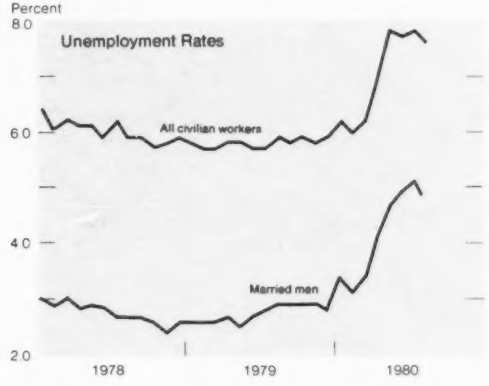
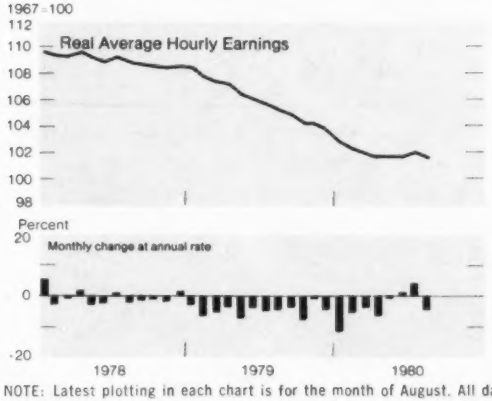
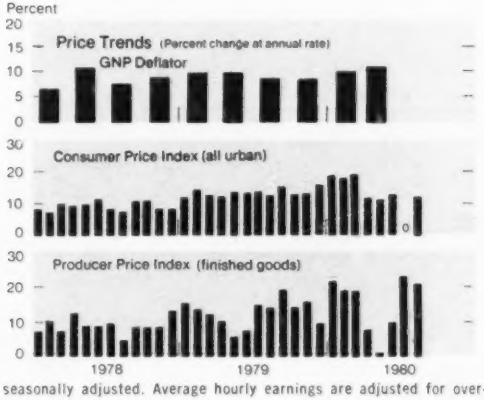
ECONOMIC INDICATORS











NOTE: Latest plotting in each chart is for the month of August. All data are seasonally adjusted. Average hourly earnings are adjusted for overtime hours in manufacturing and for inter-industry employment shifts.

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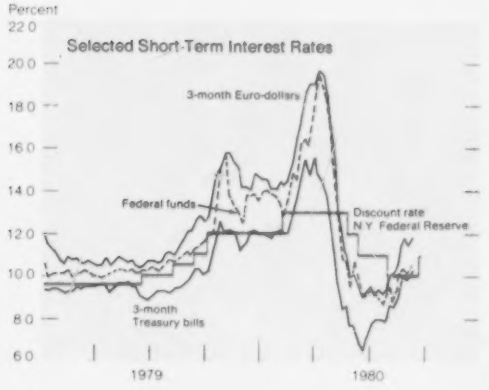
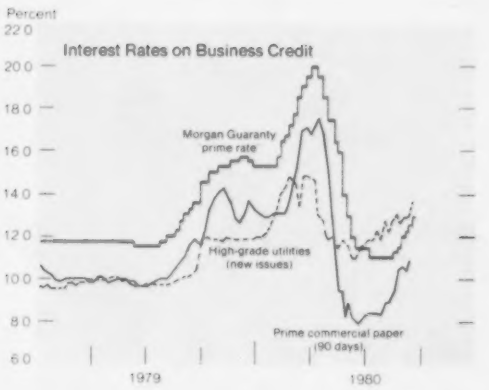
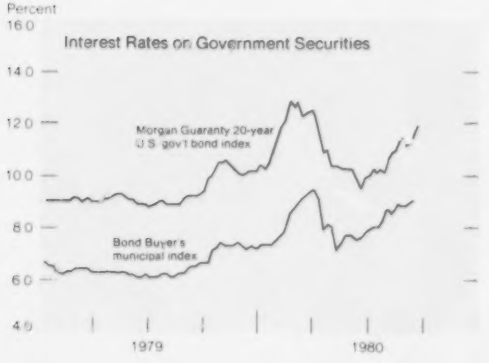
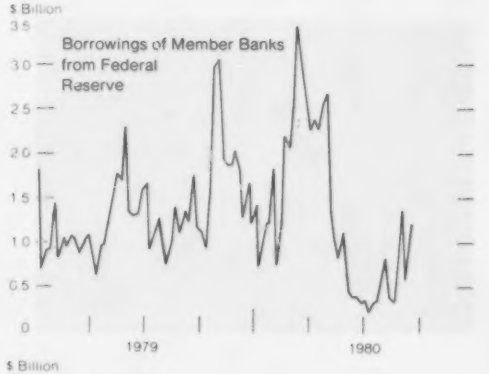
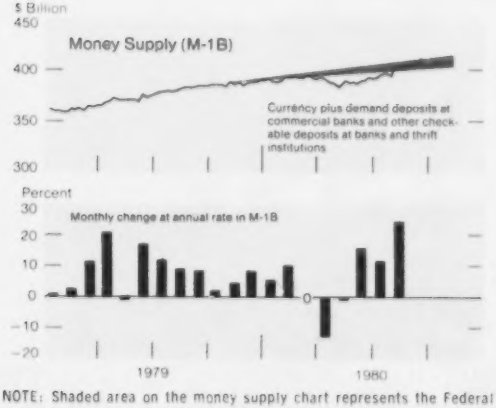
MONETARY INDICATORS

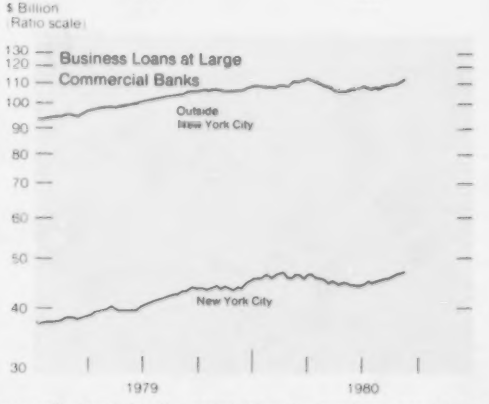












NOTE: Shaded area on the money supply chart represents the Federal Reserve growth target for the period from the fourth quarter 1979 to fourth quarter 1980. Business loans are net of bankers' acceptances and of commercial paper held by banks. All data except interest rates and member bank borrowings are seasonally adjusted. M.G.T.C. raised its prime rate to 13½% effective Oct. 1.

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